HCD-XB88AVK/XB88K

SERVICE MANUAL

E Model

Photo: HCD-XB88AVK

HCD-XB88AVK/XB88K is the tuner, deck, CD and amplifier section in LBT-XB88AVK/XB88K.

This stereo system is equipped with the Dolby Pro Logic Surround system* and the Dolby B-type noise reduction system.

* Manufactured under license from Dolby Laboratories Licensing Corporation.

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CD SECTION	Model Name Using Similar Mechanism	HCD-D670AV/N555AV
	CD Mechanism Type	CDM37L-5BD29AL CDM37LH-5BD29AL
	Base Unit Type	BU-5BD29AL
	Optical Pick-up Type	KSS-213D/Q-NP
TAPE DECK SECTION	Model Name Using Similar Mechanism	HCD-D670AV/N555AV
	Tape Transport Mechanism Type	TCM-220WR2

SPECIFICATIONS

Amplifier section

The following measured at AC 120/240 V, 50 Hz

DIN power output (Rated)

FRONT SPEAKER: 105 + 105 watts (6 ohms at 1 kHz, DIN)

CENTER SPEAKER: 20 watts (8 ohms at 1 kHz, DIN)

REAR SPEAKER: 10 + 10 watts (16 ohms at 1 kHz, DIN)

Continuous RMS power output (Reference)

FRONT SPEAKER: 130 + 130 watts (6 ohms at 1 kHz, 10% THD)

CENTER SPEAKER: 25 watts (8 ohms at 1 kHz, 10% THD)

REAR SPEAKER: 12.5 + 12.5 watts (16 ohms at 1 kHz, 10% THD)

Peak music power output (Reference) 2,000 watts

Inputs

PHONO IN (phono jacks): sensitivity 3 mV, impedance 47 kilohms

VIDEO/MD (AUDIO) IN (phono jacks): sensitivity 250 mV, impedance 47 kilohms

MIX MIC (phone jack): sensitivity 1 mV, impedance 10 kilohms

Outputs

PHONES (stereo phone jack): accepts headphones of 8 ohms or more

VIDEO/MD (AUDIO) OUT (phono jacks): voltage 250 mV, impedance 1 kilohm

FRONT SPEAKER: accepts impedance of 6 to 16 ohms

SURROUND SPEAKER CENTER: accepts impedance of 8 to 16 ohms

SURROUND SPEAKER REAR accepts impedance of 16 ohms

CD player section

System: Compact disc and digital audio system

Laser: Semiconductor laser (λ = 780 nm)

Emission duration: continuous

Laser output: Max. 44.6 μW*

* This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.

Wavelength: 780 – 790 nm

Frequency response: 2 Hz – 20 kHz (±0.5 dB)

Signal-to-noise ratio: More than 90 dB

Dynamic range: More than 90 dB

CD DIGITAL OUT (square optical connector jack, rear panel)

Wave length: 600 nm

Output level: –18 dBm

Tape player section

Recording system: 4-track 2-channel stereo

Frequency response (DOLBY NR OFF): 60 – 13,000 Hz (±3 dB), using a Sony TYPE I cassette; 60 – 14,000 Hz (±3 dB), using a Sony TYPE II cassette

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range (2 band model): 87.5 – 108.0 MHz (50 kHz step)

Antenna: FM wire antenna

Antenna terminals: 75 ohm unbalanced

Intermediate frequency: 10.7 MHz

AM tuner section

Tuning range: 531 – 1,602 kHz (with the tuning interval set at 9 kHz); 530 – 1,710 kHz (with the tuning interval set at 10 kHz)

— Continued on next page —

COMPACT DISC DECK RECEIVER

MICROFILM

SONY®

Antenna	AM loop antenna, External antenna terminals
Intermediate frequency	450 kHz

General

Power requirements	
Thailand model:	220 V AC, 50/60 Hz
Other models:	110 – 120 V or 220 – 240 V AC, 50/60 Hz Adjustable with voltage selector
Power consumption	270 watts
Dimensions (w/h/d)	Approx. 355 × 425 × 435 mm (14 × 16 3/4 × 17 1/4 in) incl. projecting parts and controls
Mass	Approx. 14.3 kg (31 lb 8 oz.)

Design and specifications are subject to change without notice.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on chip component replacement

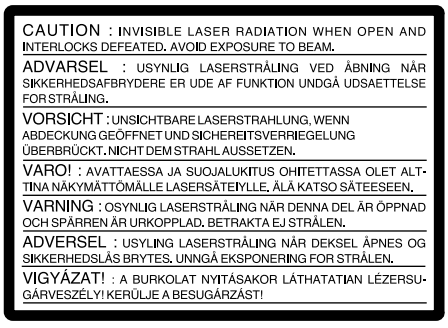
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of soldering iron around 270˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.


CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGÅ UDSAETTELSE FOR STRÅLING.
VORSICHT : UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET UND SICHEREITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.
VARO! : AVATTAESSA JA SUOJALUKITUS OHITETTASSA OLET ALTTINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING : OSYNLIG LASERSTRÅLING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.
ADVERSEL : USYLING LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VIGYÁZAT! : A BURKOLAT NYITÁSAKOR LÁTHATATIAN LÉZERSUGÁRVESZÉLY! KERÜLJE A BESUGÁRZÁST!

The following caution label is located inside of the unit.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repain parts.
The flexible board is easily damaged and should be handled with care.

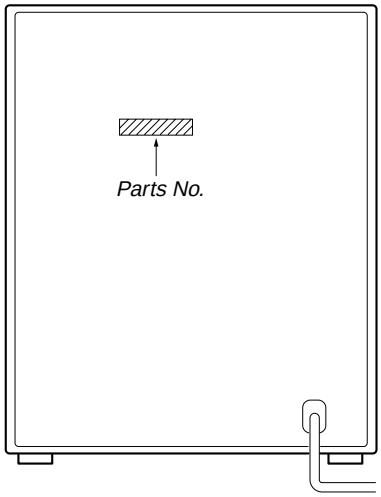
NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the “S curve check” in “CD section adjustment” and check that the S curve waveform is output three times.

MODEL IDENTIFICATION
— BACK PANEL —



MODEL	PARTS No.
XR88AVK : SP, MY model	4-996-861-1☐
XR88AVK : E, IA model	4-996-861-6☐
XR88AVK : EA model	4-996-861-7☐
XR88K : TH model	4-996-861-9☐

- Abbreviation
  EA : Saudi Arabia model
  SP : Singapore model
  MY : Malaysia model
  TH : Thai model
  IA : Indonesian model

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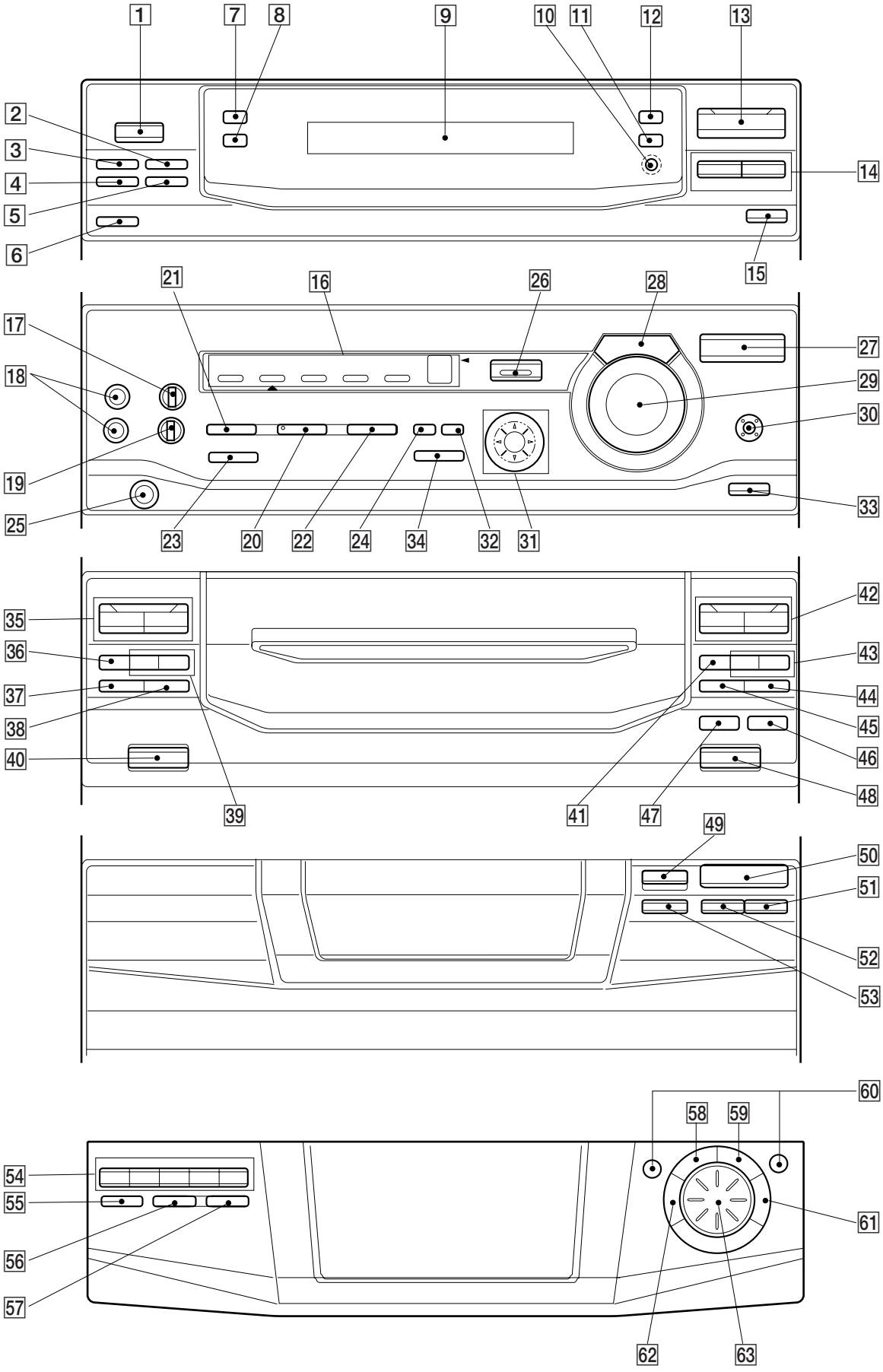
SECTION 1
GENERAL

Front Panel



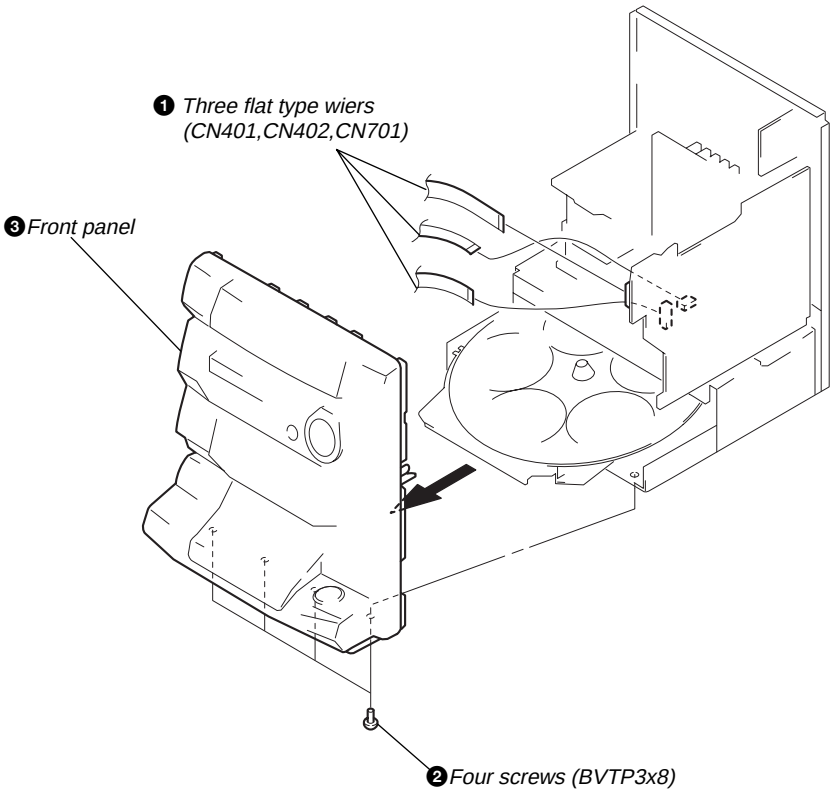
LOCATION OF PARTS AND CONTROLS

1 I/⏻ button
2 REC button
3 ◴/CLOCK SET button
4 DAILY 1 button
5 DAILY 2 button
6 SLEEP button
7 DISPLAY/DEMO button
8 SPECTRUM ANALYZER button
9 Display Window
10 ENTER/NEXT button
11 TUNER MEMORY button
12 TUNING MODE button
13 TUNER/BAND button
14 TUNING (+/–) button
15 STEREO/MONO button
16 Equalizer indicators
17 MIC LEVEL knob
18 MIC 1, MIC 2 jack
19 ECHO LEVEL knob
20 DSP button
21 WAVE button
22 PROLOGIC button
23 KARAOKE PON/MPX button
24 P FILE MEMORY button
25 PHONES jack
26 EFFECT button
27 FUNCTION button
28 GROOVE button
29 VOLUME control
30 SUPER WOOFER button
31 GEQ control buttons
32 GEQ CONTROL button
33 SUPER W MODE button
34 ENTER button
35 Deck A ◅, ▻ button
36 Deck A ■ button
37 DIRECTION button
38 DOLBY NR button
39 Deck A ◀◀, ▶▶ button
40 Deck A ⏏ EJECT button
41 Deck B ■ button
42 Deck B ◅, ▻ button
43 Deck B ◀◀, ▶▶ button
44 Deck B ● REC button
45 Deck B ❚❚ button
46 CD SYNC button
47 H SPEED DUB button
48 Deck B ⏏ EJECT button
49 ⏏ OPEN button
50 CD ▻ button
51 CD ■ button
52 CD ❚❚ button
53 DISC SKIP button
54 DISC1-DISC5 buttons
55 NON-STOP button
56 LOOP button
57 FLASH button
58 1/ALL DISCS button
59 PLAY MODE button
60 CD ◀◀, ▶▶ button
61 REPEAT button
62 EDIT button
63 ⏮◅ AMS ▻▻⏭ dial

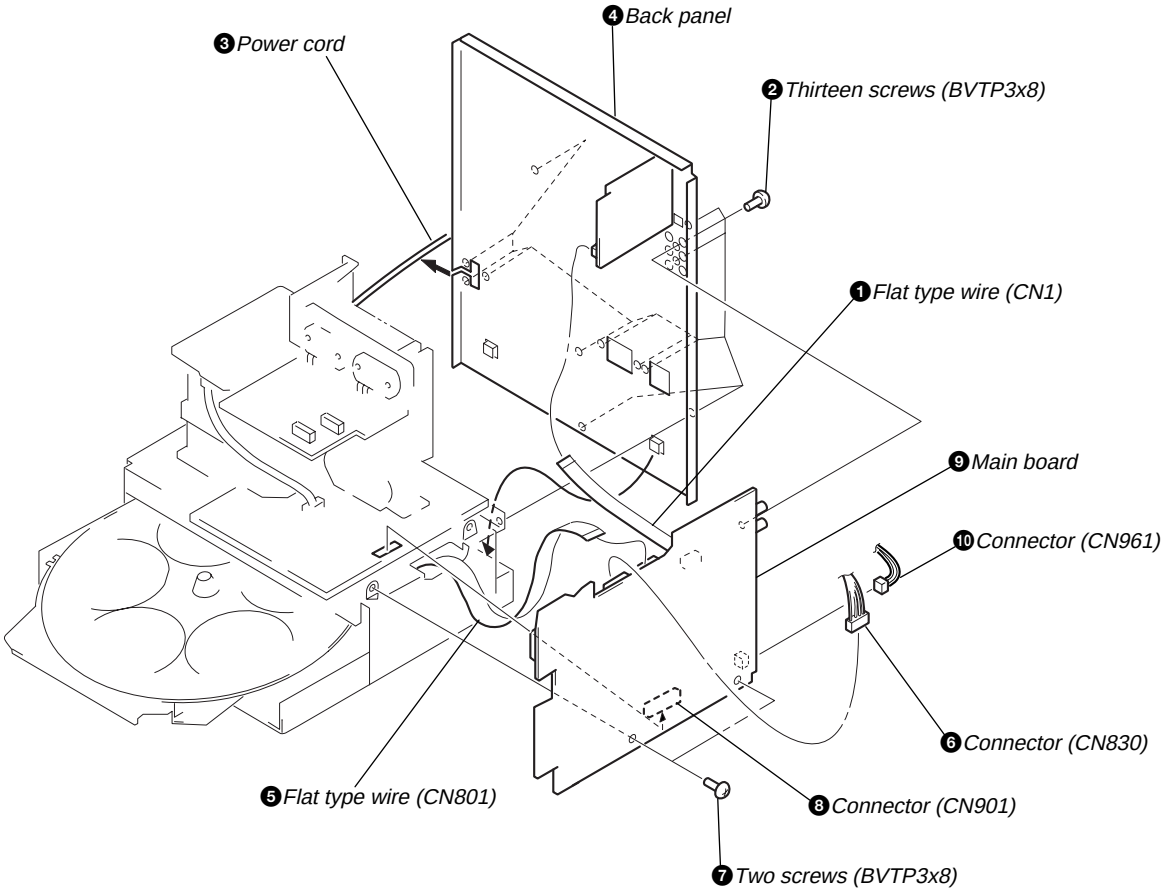
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

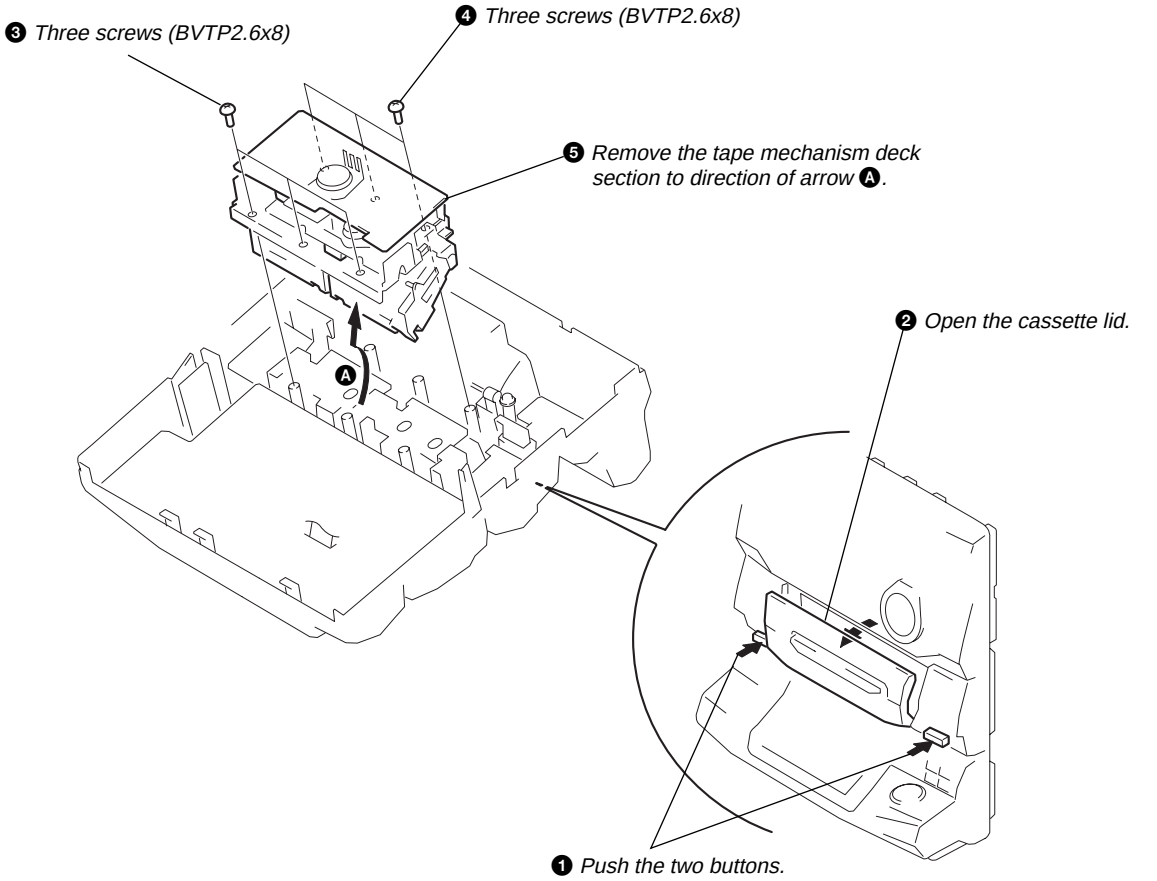
2-1. FRONT PANEL



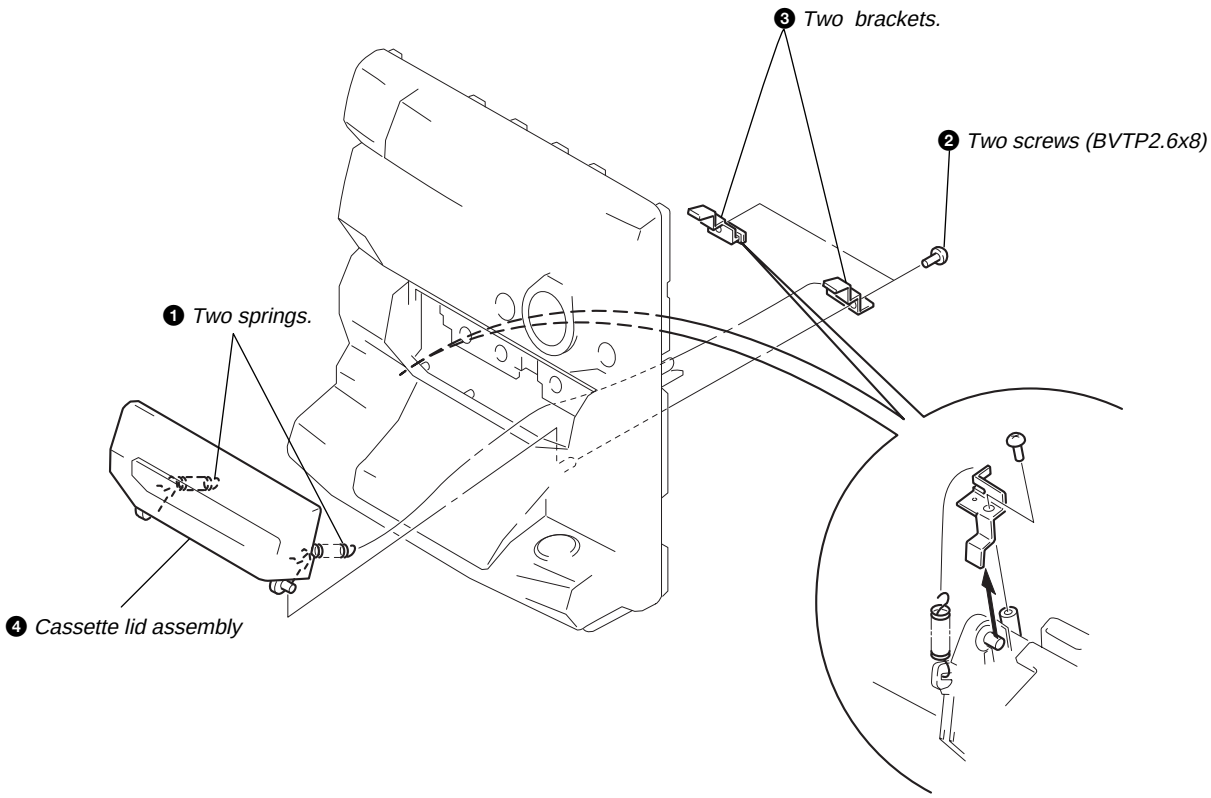
2-2. MAIN BOARD



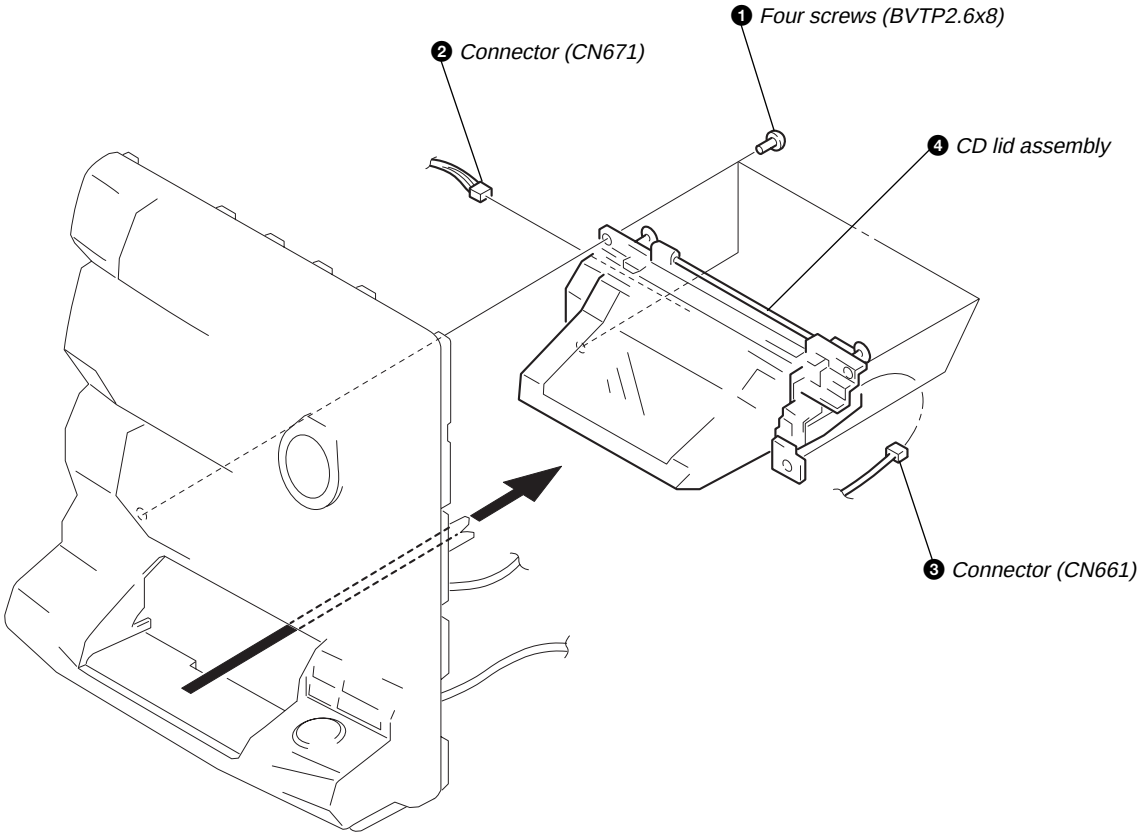
2-3. TAPE MECHANISM DECK


❸ Three screws (BVTP2.6x8)
❹ Three screws (BVTP2.6x8)
❺ Remove the tape mechanism deck section to direction of arrow Ⓐ.
❷ Open the cassette lid.
Ⓐ
❶ Push the two buttons.

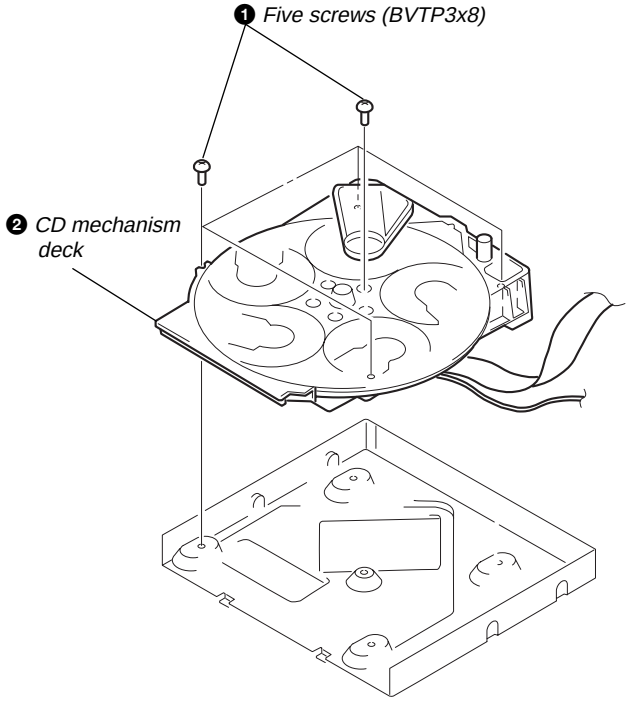
2-4. CASSETTE LID ASSEMBLY



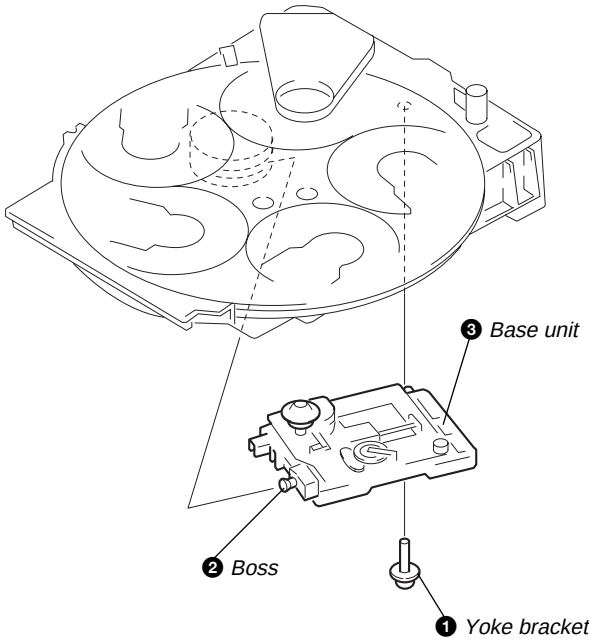
2-5. CD LID ASSEMBLY



2-6. CD MECHANISM DECK

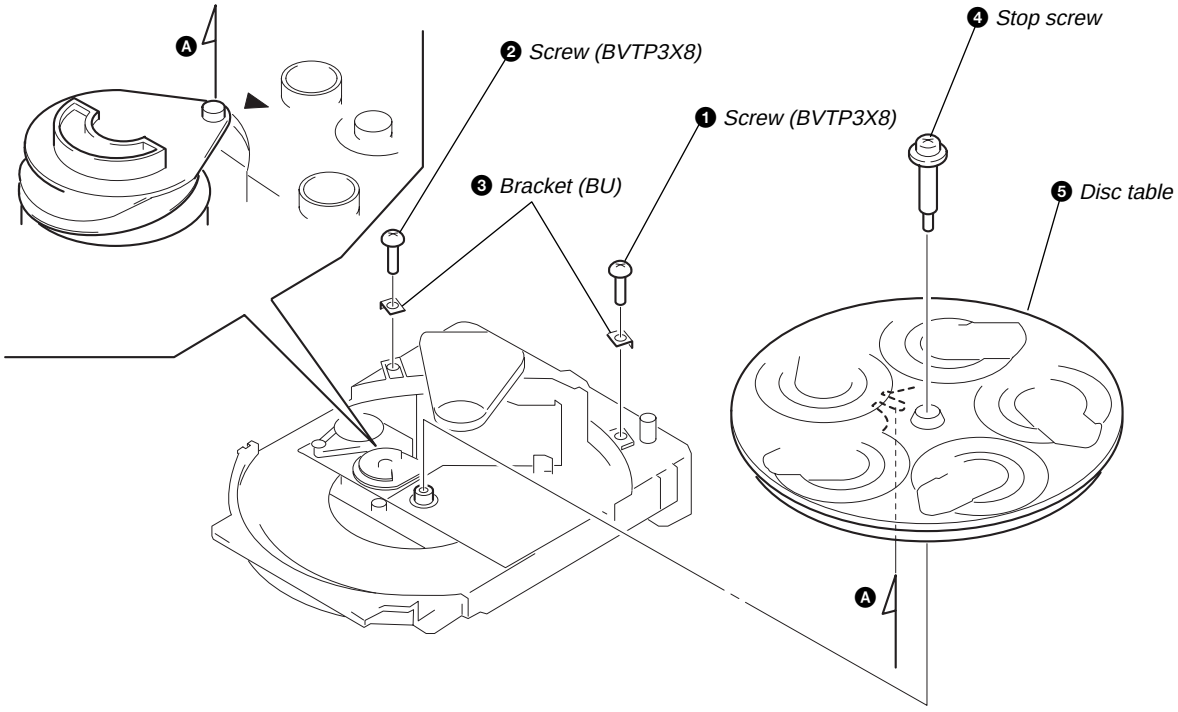


2-7. BASE UNIT



2-8. DISC TABLE

NOTE:
When the disc table is installed, adjust the positions of roller cam and mark ▶ as shown in the figure, then set to the groove of disc table.



SECTION 3
SERVICE MODE

MC Cold Reset

• The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure:

1. Press three buttons [SPECTRUM ANALYZER], [ENTER], and [DISC 1] simultaneously.
2. The fluorescent indicator tube becomes blank instantaneously, and the set is reset.

CD Delivery Mode

• This mode moves the pick-up to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Press [PLAY MODE] button and [I/⏻] button simultaneously.
3. A message "LOCK" is displayed on the fluorescent indicator tube, and the CD delivery mode is set.

MC Hot Reset

• This mode resets the set with the preset data kept stored in the memory. The hot reset mode functions same as if the power cord is plugged in and out.

Procedure:

1. Press three buttons [SPECTRUM ANALYZER], [ENTER], and [DISC 2] simultaneously.
2. The fluorescent indicator tube becomes blank instantaneously, and the set is reset.

Sled Servo Mode

• This mode can run the CD sled motor freely. Use this mode, for instance, when cleaning the pick-up.

Procedure:

1. Select the function "CD".
2. Press three buttons [SPECTRUM ANALYZER], [ENTER], and [FUNCTION] simultaneously.
3. The Sled Servo mode is selected, if "CD" is blanking on the fluorescent indicator tube.
4. With the CD in stop status, press [▶▶] button in CD section to move the pick-up to outside track, or [◀◀] button to inside track.
5. To exit from this mode, perform as follows:
   1) Move the pick-up to the most inside track.
   2) Press three buttons in the same manner as step 2.

Note:

• Always move the pick-up to most inside track when exiting from this mode. Otherwise, a disc will not be unloaded.
• Do not run the sled motor excessively, otherwise the gear can be chipped.

Change-over of FUNCTION Name

• The FUNCTION name of external input terminal can be changed over to VIDEO or MD. With the FUNCTION selected to "MD", about 5dB mute is applied to the input gain.

Procedure:

1. Press [I/⏻] button to turn the set OFF.
2. Press [I/⏻] button together with [FUNCTION] button, and the power is turned on, the display of fluorescent indicator tube changes to "MD" or "VIDEO" instantaneously, and thus the FUNCTION is changed over.

Change-over of AM Tuner Step between 9kHz and 10kHz

• A step of AM channels can be changed over between 9kHz and 10kHz.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Select the function "TUNER", and press [TUNER/BAND] button to select the BAND "AM".
3. Press [I/⏻] button to turn the set OFF.
4. Press [ENTER/NEXT] and [I/⏻] buttons simultaneously, and the display of fluorescent indicator tube changes to "AM 9k STEP" or "AM 10k STEP", and thus the channel step is changed over.

LED and Fluorescent Indicator Tube All Lit, Key Check Mode

Procedure:

1. Press three buttons [SPECTRUM ANALYZER], [ENTER], and [DISC 3] simultaneously.
2. LEDs and fluorescent indicator tube are all turned on.
   Press [DISC 2] button, and the key check mode is activated.
3. In the key check mode, the fluorescent indicator tube displays "K 1 V0 J0". Each time a button is pressed, "K"value increases. However, once a button is pressed, it is no longer taken into account.
   "J" Value increases like 1, 2, 3 ... if rotating JOG knob in "+" direction, or it decreases like 0, 9, 8 ... if rotating in "-" direction.
   "V" Value increases like 1, 2, 3 ... if rotating [VOLUME] knob in "+" direction, or it decreases like 0, 9, 8 ... if rotating in "-" direction.
4. To exit from this mode, press three buttons in the same manner as step 1, or disconnect the power cord.

Aging Mode

This mode can be used for operation check of CD section and tape deck section.

- If an error occurred:
  The aging operation stops.
- If no error occurs:
  The aging operation continues repeatedly.

1. Aging Mode in CD Section

1-1. Operating procedure of Aging Mode

1. Set discs in DISC 1 and DISC 3 trays.
2. Select the function “CD”.
3. Press three buttons [SPECTRUM ANALYZER], [ENTER], and [KARAOKE PON/MPX] simultaneously.
4. The aging mode is activated, if a roulette mark on the fluorescent indicator tube is blinking.
5. In the aging mode, the aging is executed in a sequence given in “1-2. Operation during Aging Mode”. The aging continues unless an alarm occurred.
6. To exit from the aging mode, press [I/⏻] button to turn the set OFF.

- If a button other than buttons In CD section is pressed during aging, the aging in the CD section is finished.
- To execute aging to the tape deck section successively, press [▷] button in the deck A.
  “AGING” is displayed on the fluorescent indicator tube. (For the aging in tape deck, see “2. Aging Mode in Tape Deck Section”.

1-2. Operation during aging Mode

In the aging mode, the program is executed in the following sequence.

1. The disc tray turns to select a disc. (For a disc selection sequence, see Section 1-3.)
2. TOC of disc is read.
3. The pick-up accesses to the last track.
4. Steps 1 through 3 are repeated.

1-3. Disc Selection Sequence

- During the aging mode, discs are selected in the following sequence:

Disc 1 → Disc 3
↑ ↓
Disc 3 ← Disc 1

2. Aging Mode in Tape Deck Section

2-1. Operating procedure of Aging Mode

1. Load a commercially available 10-minute tape into the decks A and B respectively.
   (If a 10-minute tape is not available, another tape may be used but a cycle time will be longer.)
2. Select the function “TAPE”.
3. Rewind tapes in advance by pressing [◀◀] button respectively on decks A and B.
4. Press three buttons [SPECTRUM ANALYZER], [ENTER], and [KARAOKE PON/MPX] simultaneously.
5. Press [▷] button on deck A. (This button triggers the aging mode.)
6. The aging mode is activated if “AGING A” is displayed on the fluorescent indicator tube.
7. In the aging mode, the aging is executed in a sequence given in “2-2. Operation during Aging Mode”. The aging continues unless an alarm occurred.
8. To exit from the aging mode, press [I/⏻] button to turn the set OFF.

2-2. Operation during Aging Mode

In the aging mode, the program is executed in the following sequence.

1. A tape on FWD side is played for one minute.
2. PAUSE STOP is made.
3. Recording is made for 3 minutes. (For the deck not having the record function, the play is executed.)
4. FF is executed up to the end of tape.
5. A tape is reversed, and the tape on REV side is played for one minute.
6. PAUSE STOP is made.
7. Recording is made for 3 minutes. (For the deck not having the record function, the play is executed.)
8. FF is executed up to the end of tape.
9. Steps 1 through 8 are executed for the other deck.
10. Steps 1 through 9 are repeated unless an alarm occurred.

2-3. Deck Selection Sequence

- During the aging mode, decks are selected in the following sequence:

Deck A (FWD) → Deck A (REV)
↑ ↓
Deck B (REV) ← Deck B (FWD)

SECTION 4
MECHANICAL ADJUSTMENTS

Precaution

1. Clean the following parts with a denatured alcohol-moistened swab:
   - record/playback heads
   - erase head
   - capstan
   - pinch rollers
   - rubber belts
   - idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	36 to 61 g • cm (0.5 - 0.84 oz • inch)
FWD back tension	CQ-102C	2 to 6 g • cm (0.02 - 0.08 oz • inch)
REV	CQ-102RC	36 to 61 g • cm (0.5 - 0.84 oz • inch)
REV back tension	CQ-102RC	2 to 6 g • cm (0.02 - 0.08 oz • inch)
FF/REW	CQ-201B	61 to 143 g • cm (0.85 - 1.99 oz • inch)
FWD tension	CQ-403A	100 g or more (3.53 oz or more)
REV tension	CQ-403R	100 g or more (3.53 oz or more)

SECTION 5
ELECTRICAL ADJUSTMENTS

DECK SECTION **0 dB=0.775V**

1. Demagnetize the record/playback head with a head damagnetizer.
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjusted.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.
7. Switches and controls should be set as follows unless otherwise specified.

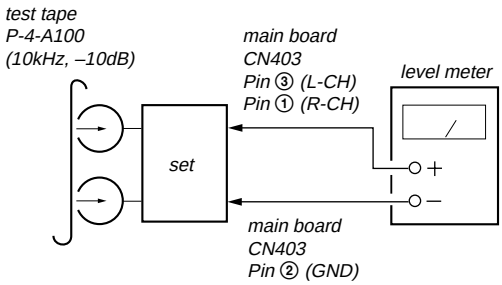
Tape	Signal	Used for
P-4-A100	10 kHz, –10 dB	Azimuth Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment
P-4-L300	315 Hz, 0 dB	Level Adjustment

Record/Playback Head Azimuth Adjustment (Deck A, Deck B)

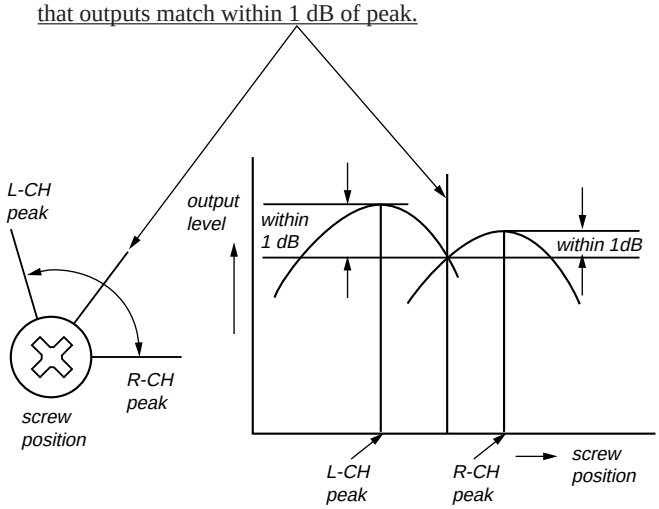
Note: Perform this adjustments for both decks.

Procedure:

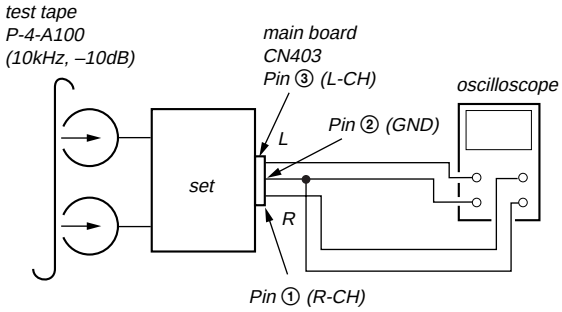
1. Mode : Playback

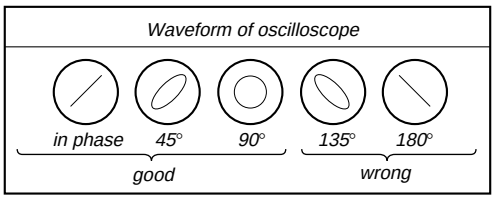


2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1 dB of peak.



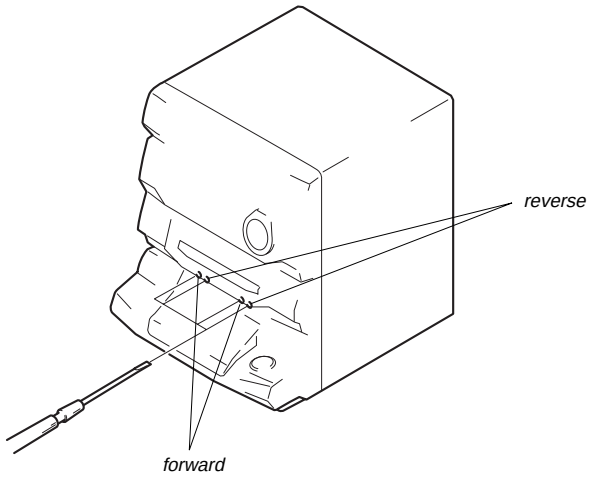
3. Mode: Playback





4. After the adjustments, apply suitable locking compound to the parts adjusted.

Adjustment Location: Playback Head (Deck A)
Record/Playback/Erase Head (Deck B)



Tape Speed Adjustment (Deck A)

Note: Set the test mode using the following method and begin tape speed adjustment.
In the test mode, the tape will move at double speed or normal speed each time the H SPEED DUB. button is pressed.

Procedure :
With the power turned ON, press the SPECTRUM ANALYZER button, ENTER button, and EFFECT button simultaneously.
(The "VOLUME" on the fluorescent display tube will blink while in the test mode.)
To exit the test mode, press the I/⏻ button.

1. Load WS-48B into deck B.
2. Play deck B.
3. Press the H SPEED DUB. button and play the tape at double speed.
4. Adjust RV652 of the AUDIO board so that the reading of the frequency counter becomes 6000 ± 180 Hz.
5. Press the H SPEED DUB. button and play the tape at normal speed.
6. Adjust RV651 of the AUDIO board so that the reading of the frequency counter becomes 3000 ± 90 Hz.

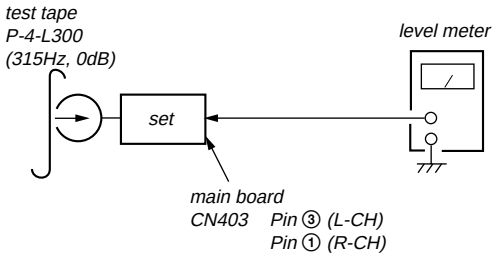
Adjustment Location: AUDIO board

Sample Value of Wow and flutter

W.RMS (JIS) less than 0.3%
(test tape: WS-48B)

Playback Level Adjustment (Deck A, Deck B)

Procedure:
Mode: Playback



Deck A is RV311 (L-CH) and RV411 (R-CH), deck B is RV301 (L-CH) and RV401 (R-CH)
so that adjustment within the following adjustment level.

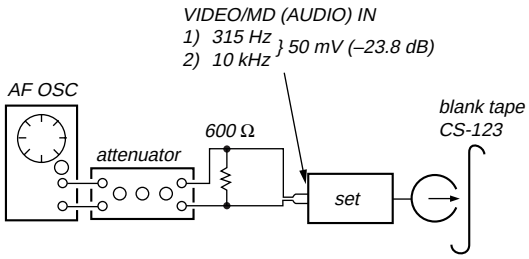
Adjustment level:
CN403 playback level: 301.5 to 338.3 mV (–8.2 to –7.2 dB)
level difference between the channels: within ± 0.5 dB
Adjustment Location: AUDIO board

Record Bias Adjustment (Deck B)

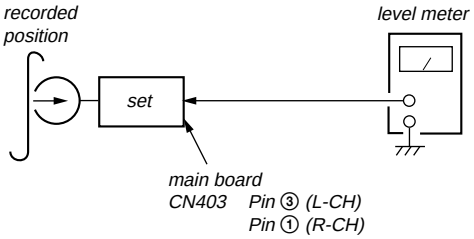
Procedure:

INTRODUCTION
When set to the test mode performed in **Tape Speed Adjustment**, when the tape is rewound after recording, the "REC memory mode" which rewinds only the recorded portion and playback is set.
This "REC memory mode" is convenient for performing this adjustment. During recording, the input signal FUNCTION will automatically switch to VIDEO.

1. Press [FUNCTION] button to select VIDEO. (This step is not necessary if the above test mode has already been set.)
2. Load a tape into deck B, and press the [● REC] button.
3. Mode: Record



4. Mode: Playback



5. Confirm playback the signal recorded in step 2 become adjustment level as follows.
   If these levels do not adjustment level, adjust the RV341 (L-CH) and RV441 (R-CH) on the AUDIO board to repeat steps 3 and 4.

Adjustment level: The playback output of 10 kHz level difference against 315 Hz reference should be ± 1.0 dB.

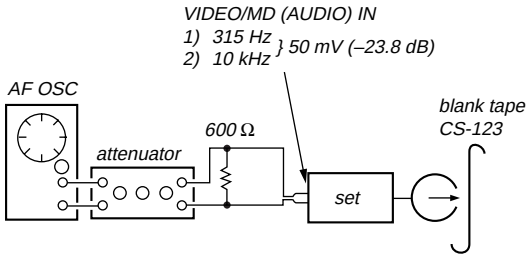
Adjustment Location: AUDIO board

Record Level Adjustment (Deck B)

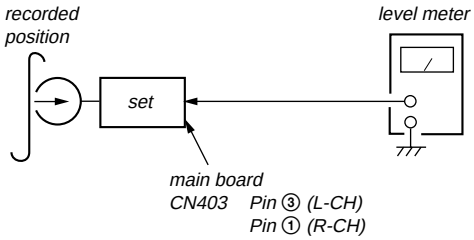
Procedure:

INTRODUCTION
When set to the test mode performed in **Tape Speed Adjustment**, when the tape is rewound after recording, the "REC memory mode" which rewinds only the recorded portion and playback is set.
This "REC memory mode" is convenient for performing this adjustment. During recording, the input signal FUNCTION will automatically switch to VIDEO.

1. Press [FUNCTION] button to select VIDEO. (This step is not necessary if the above test mode has already been set.)
2. Load a tape into deck B, and press the [● REC] button.
3. Mode: Record



4. Mode: Playback

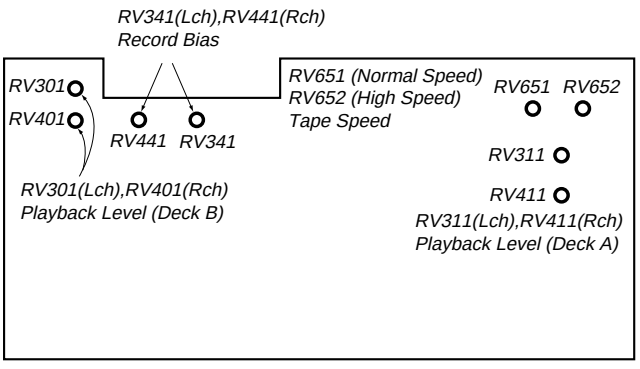


5. Confirm playback the signal recorded in step 2 become adjustment level as follows.
   If these levels do not adjustment level, adjust the RV301 (L-CH) and RV351 (R-CH) on the MAIN board to repeat steps 3 and 4.

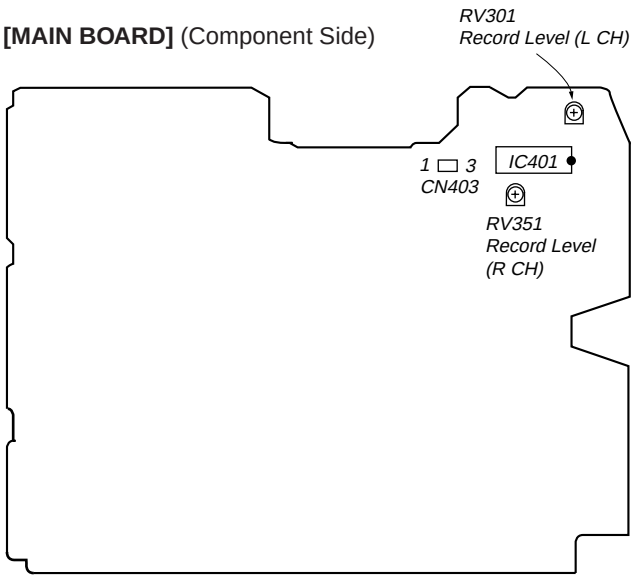
Adjustment level:
CN403 playback level: 47.2 to 53.0 mV (–24.3 to –23.3 dB)

Adjustment Location: MAIN board

Adjustment Location
[AUDIO BOARD] (Conductor Side)



[MAIN BOARD] (Component Side)

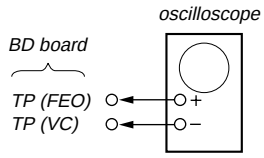


CD SECTION

Note:

1. CD Block is basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

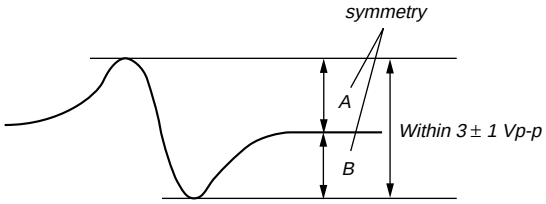
S Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FEO).
2. Connect between test point TP (FOK) and Ground by lead wire.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and turned Power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3 ± 1Vp-p.

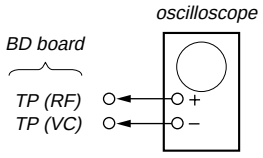
S-curve waveform



6. After check, remove the lead wire connected in step 2.

Note: • Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

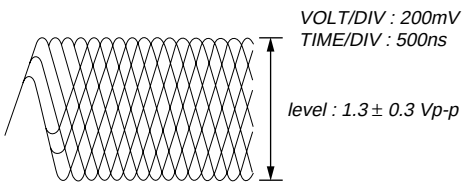


Procedure :

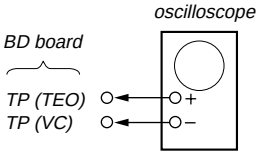
1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note: Clear RF signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.

RF signal waveform



E-F Balance (1 Track Jump) check

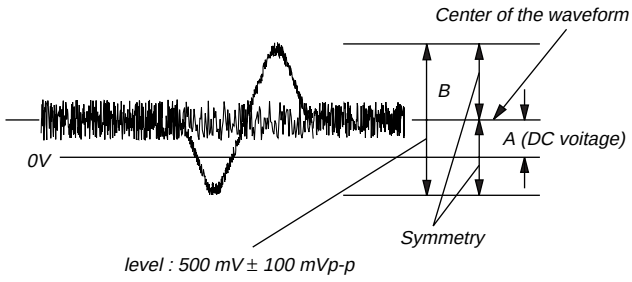


Procedure:

1. Connect oscilloscope to test point TP (TEO) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in to play the number five track.
4. Press the "▮▮ (Pause)" button.
5. Check the level B of the oscilloscope's waveform and the A (DC voltage) of the center of the Traverse waveform.
   Confirm the following:

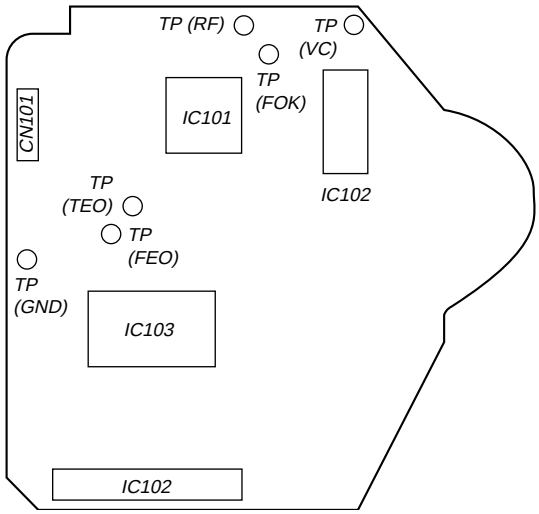
   • A/B x 100 = less then ± 7 (%)
   • B = 500 ± 100 mVp-p

1 track jump waveform



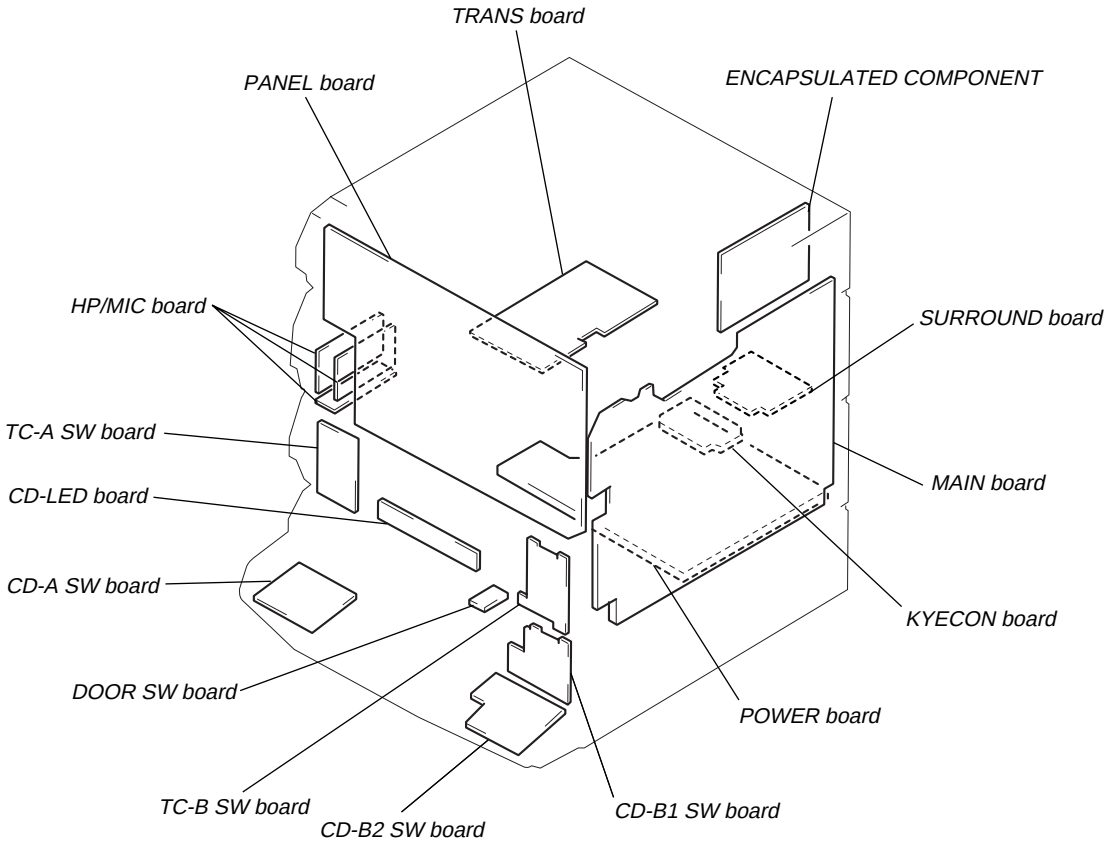
Adjustment Location:

[BD BOARD] (Conductor Side)

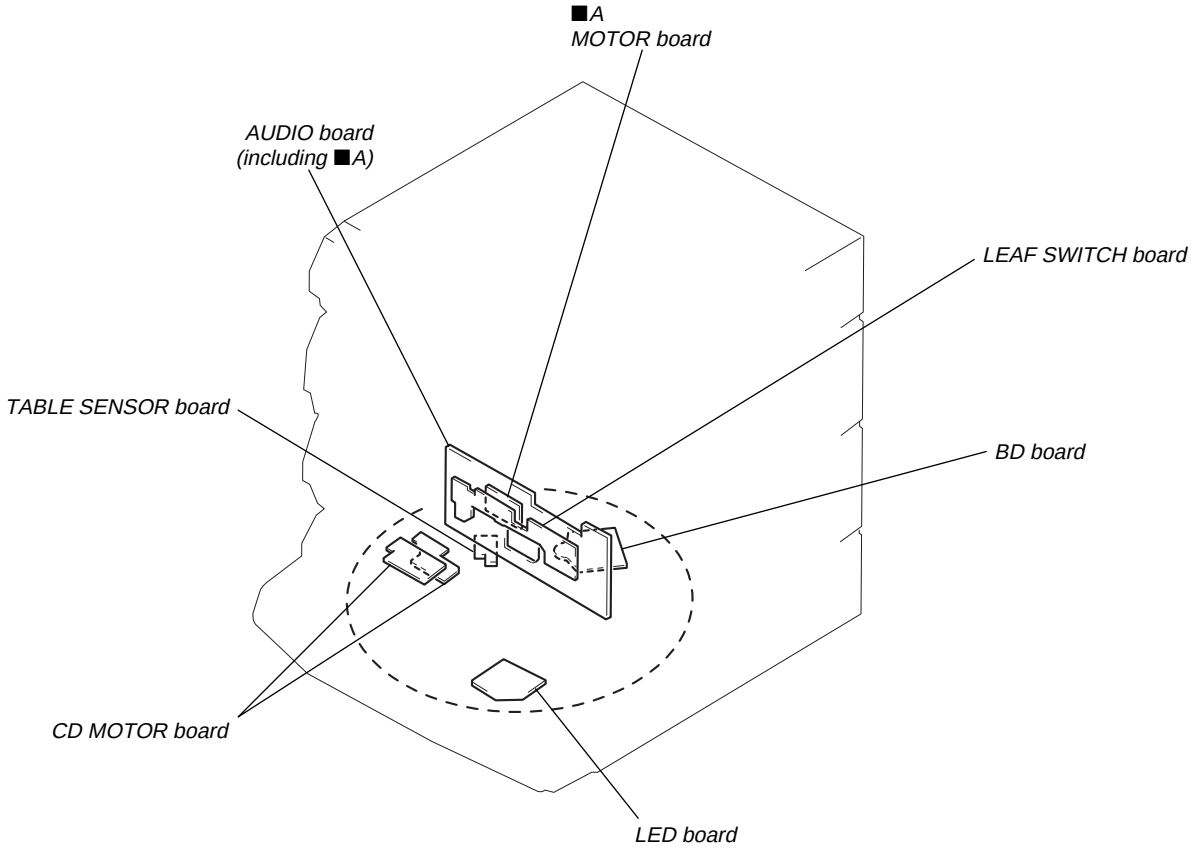


SECTION 6
DIAGRAMS

6-1. CIRCUIT BOARDS LOCATION

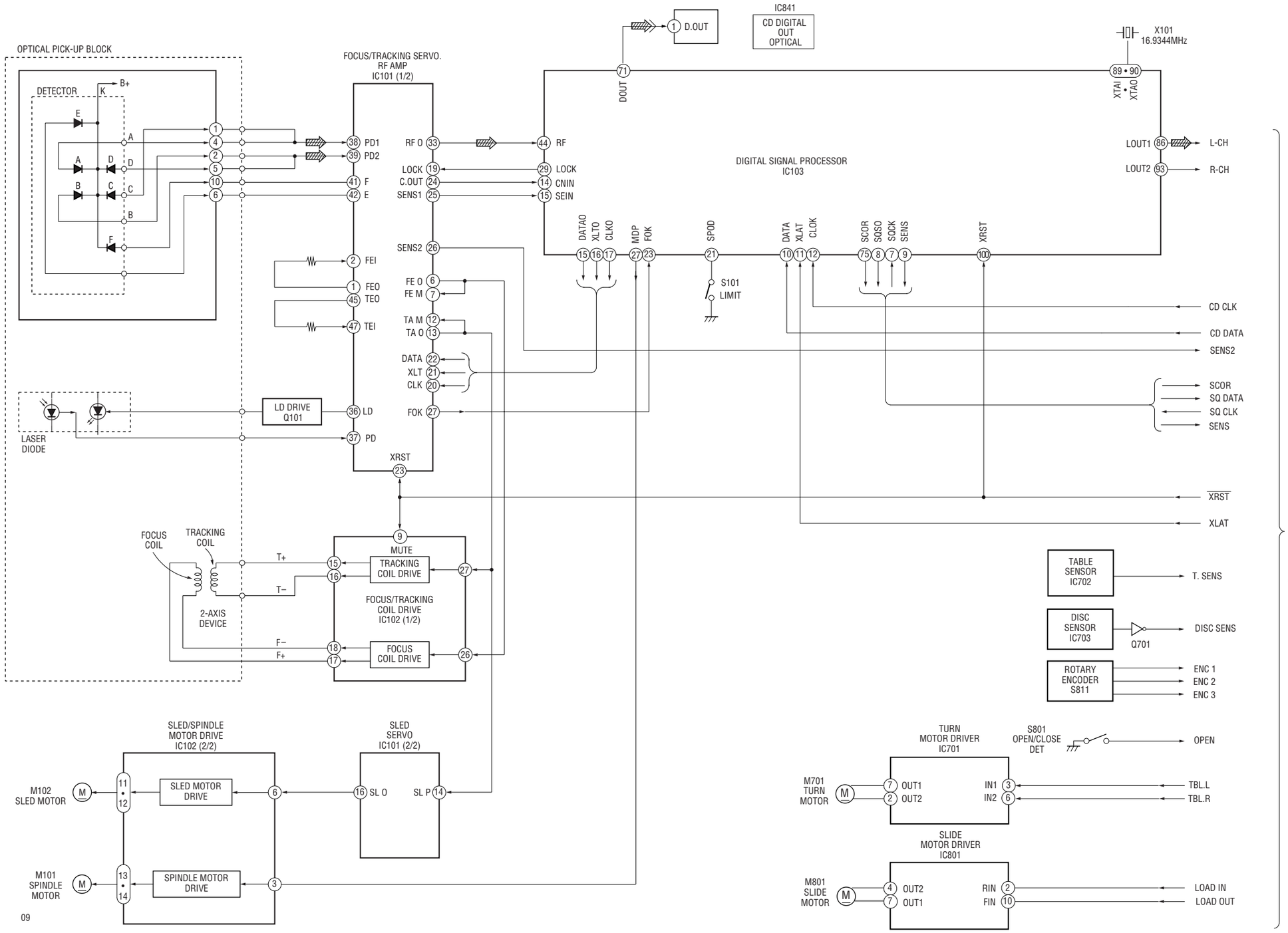


Note: ■A is including in AUDIO board.



6-2. BLOCK DIAGRAMS

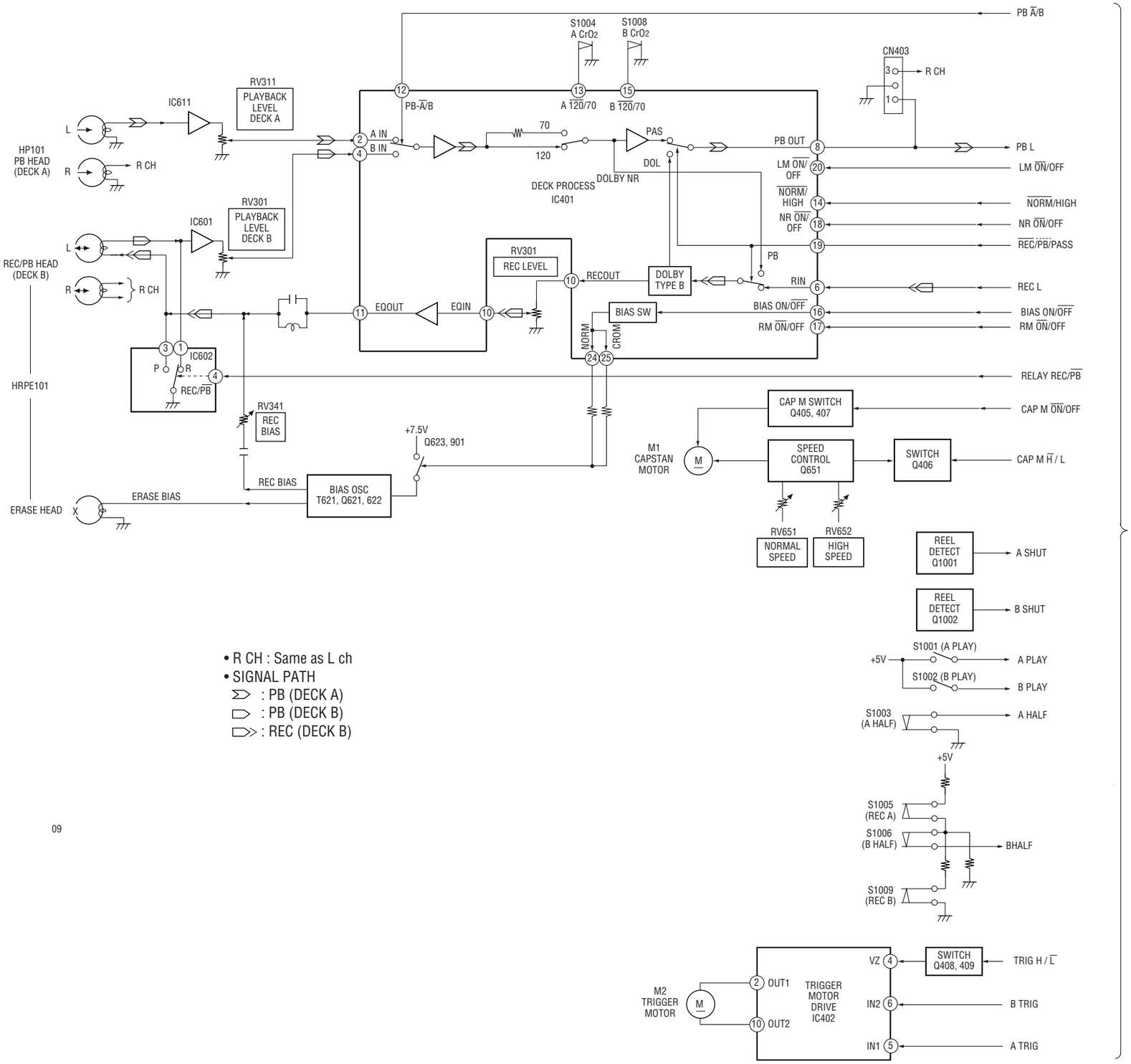
– CD SECTION –



C
MAIN
SECTION
(Page 21)

- R CH: Same as L ch
- SIGNAL PATH
  : CD
  : Digital out

– DECK SECTION –

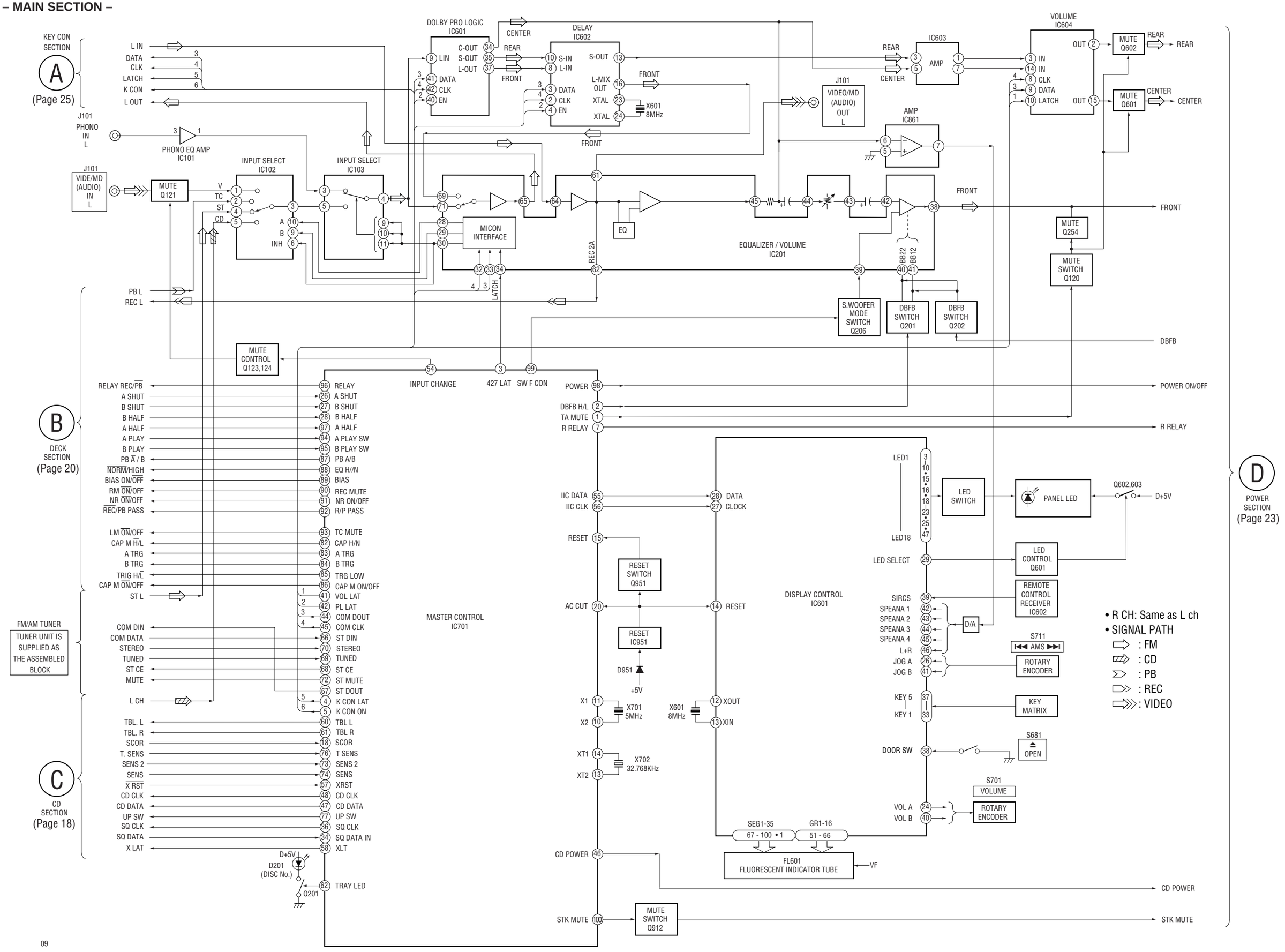


B
MAIN SECTION
(Page 21)

- R CH : Same as L ch
- SIGNAL PATH
  - ≥ : PB (DECK A)
  - ⊐ : PB (DECK B)
  - ⊐≥ : REC (DECK B)

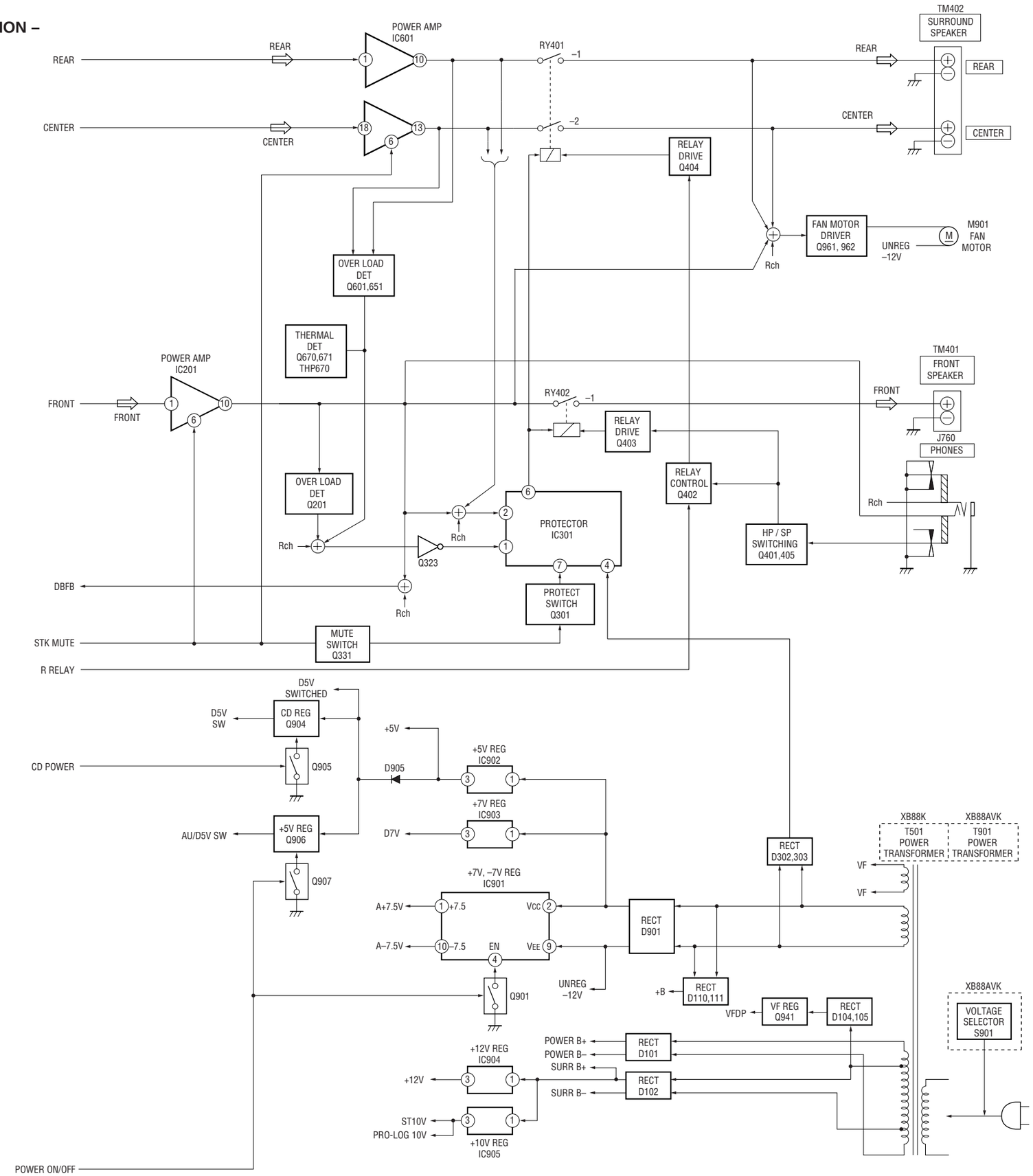
09

– MAIN SECTION –



09

– POWER SECTION –



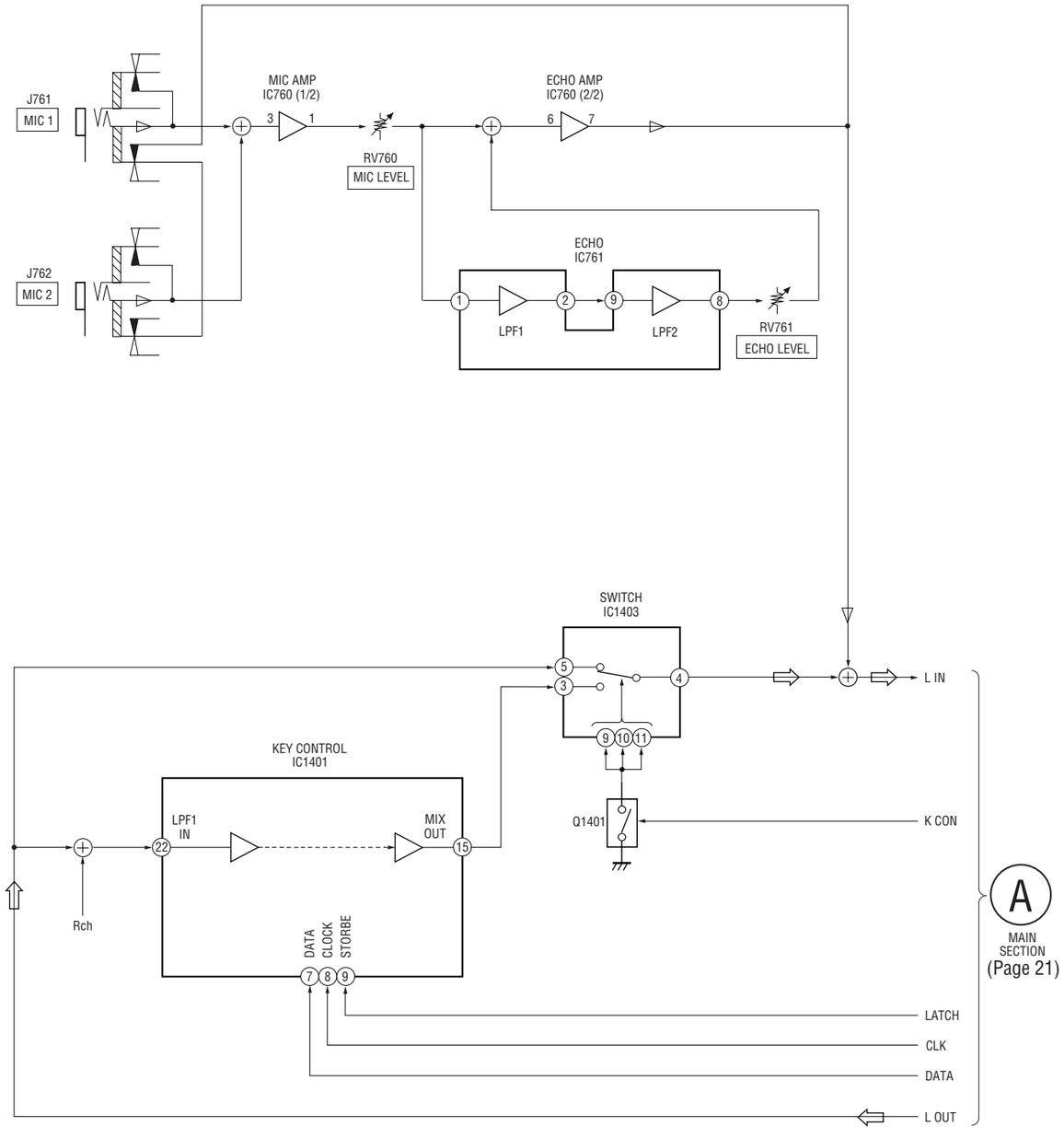
D

MAIN SECTION
(Page 22)

- R CH : Same as L ch
- SIGNAL PATH
  ⇨ : FM

09

– KEY CON SECTION –



09

- R CH : Same as Lch
- Signal path
  ⇨ : FM
  ▷ : MIC

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For schematic diagrams.

Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line.
- B– : B– Line.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - : FM
  - : AM
  - : PB (DECK A)
  - : PB (DECK B)
  - : REC (DECK B)
  - : CD
  - : digital out
  - : PHONO

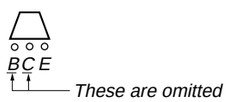
For printed wiring boards.

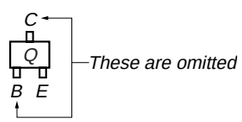
Note:

- : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ○ : Through hole.
- △ : internal component.
- : Pattern from the side which enables seeing.

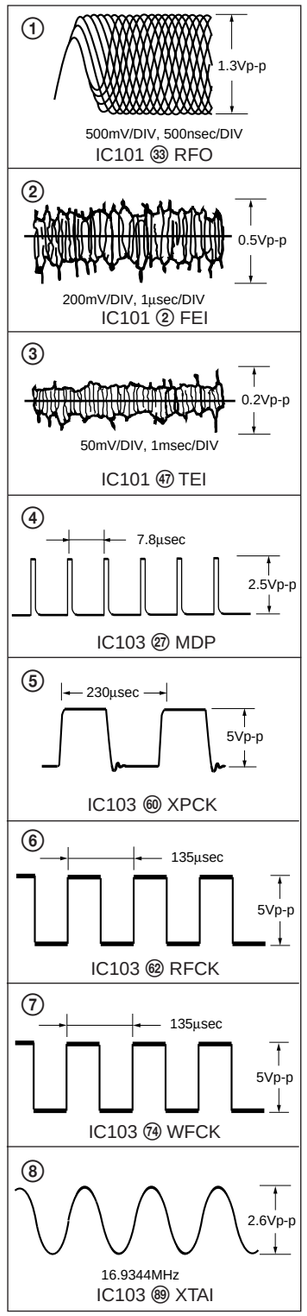
(The other layers' patterns are not indicated.)

- **Indication of transistor**

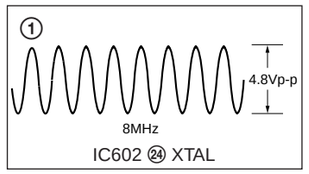




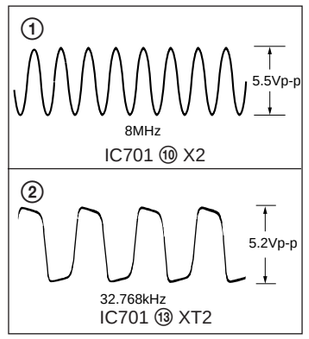
WAVEFORMS
– CD SECTION –



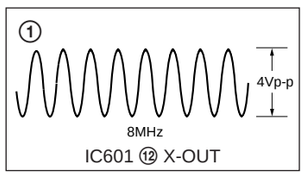
– MAIN SECTION (1/5) –



– MAIN SECTION (2/5) –

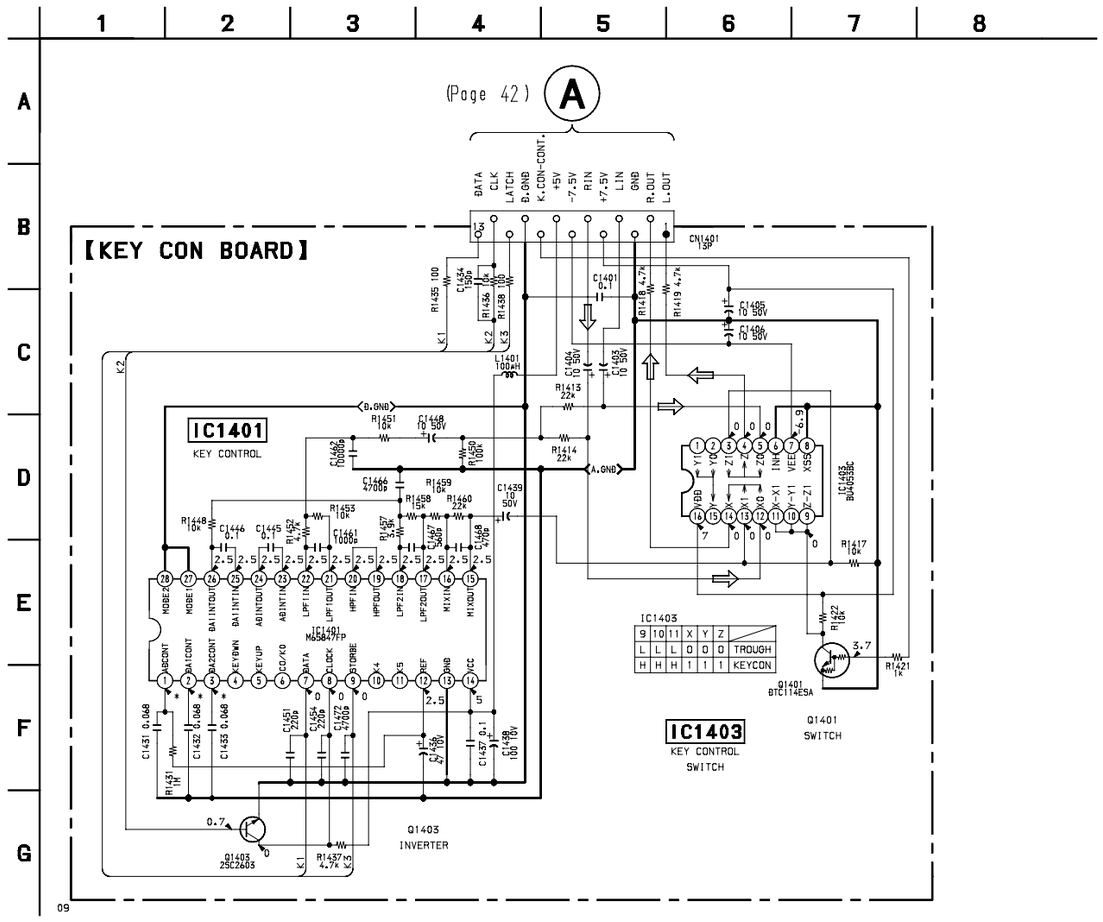


– DISPLAY SECTION –



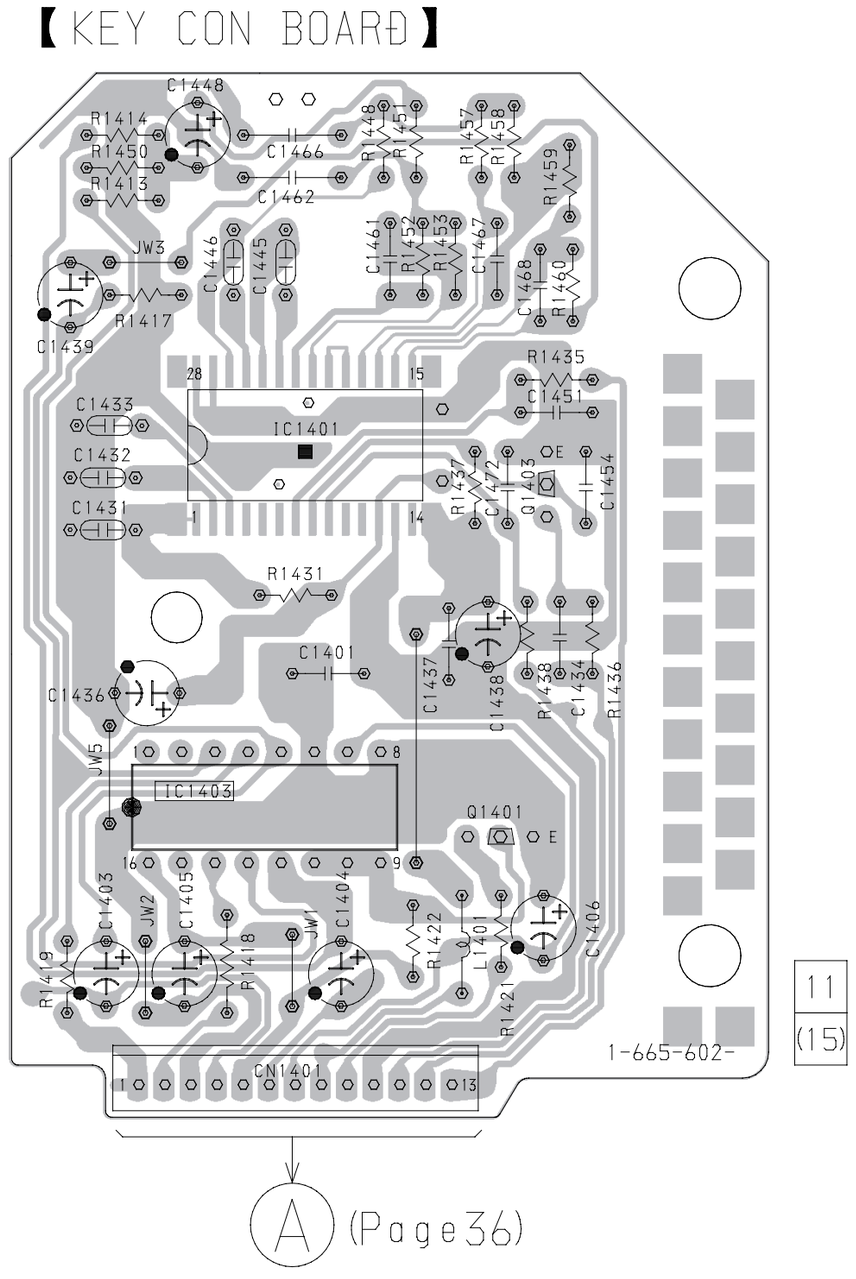
6-3. SCHEMATIC DIAGRAM – KEY CON SECTION –

• See page 81 for IC Block Diagrams.



6-4. PRINTED WIRING BOARD – KEY CON SECTION –

• See page 16 for Circuit Boards Location.

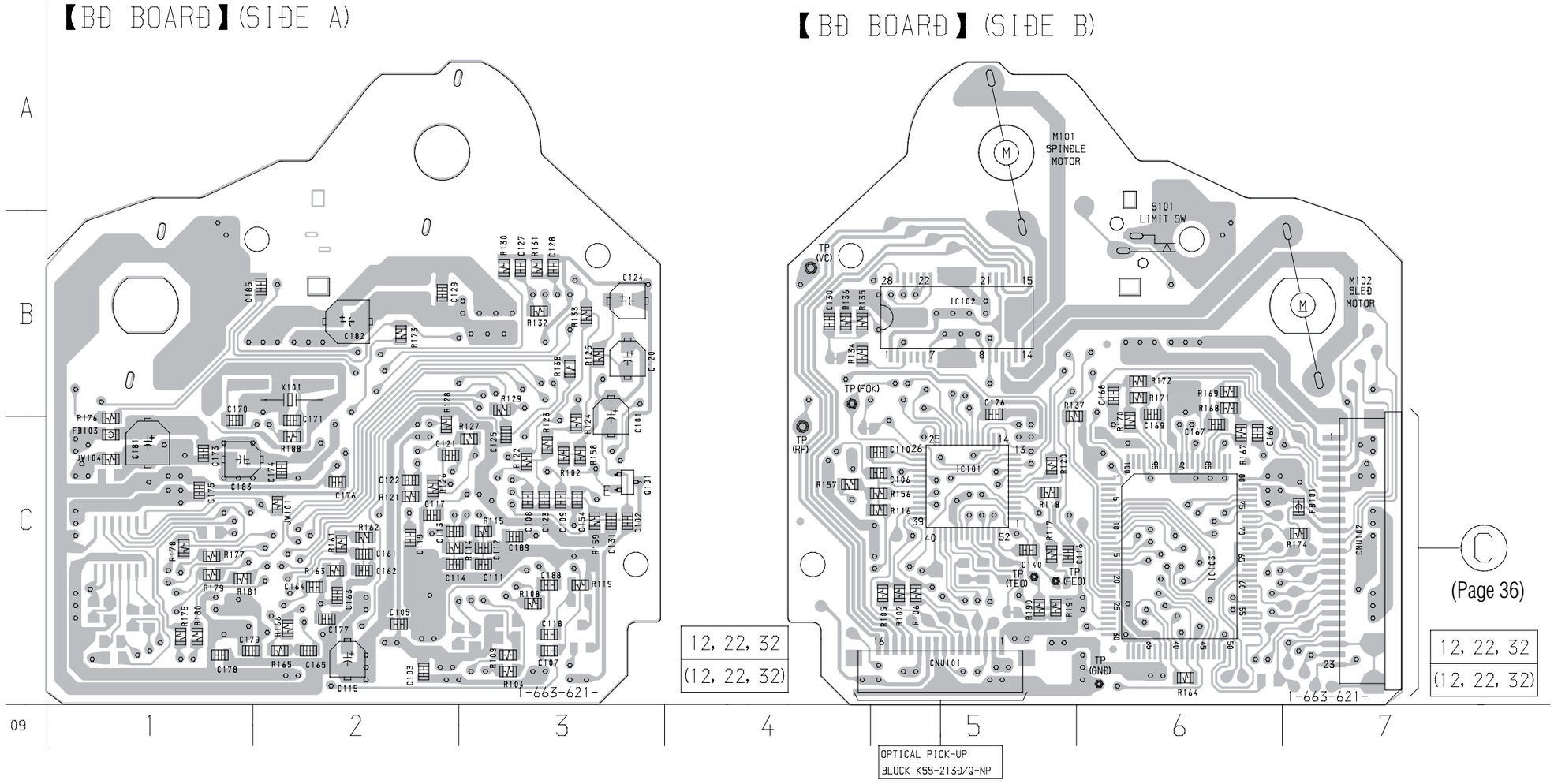


6-5. PRINTED WIRING BOARD – CD SECTION –

• See page 16 for Circuit Boards Location.

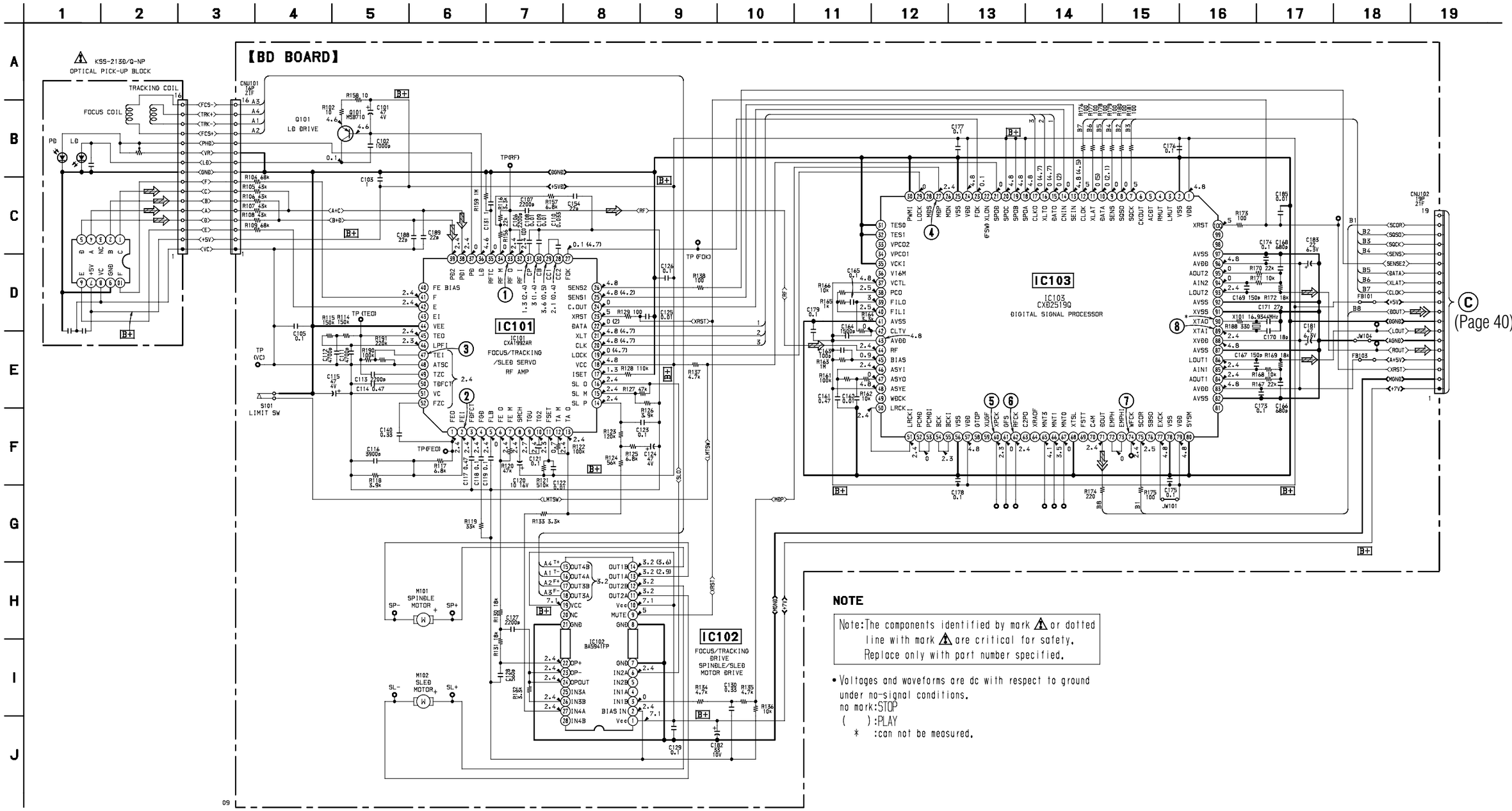
• **Semiconductor Location**

Ref. No.	Location
IC101	C-5
IC102	B-5
IC103	C-6
Q101	C-3



6-6. SCHEMATIC DIAGRAM – CD SECTION –

- See page 28 for Waveforms.
- See page 77 for IC Block Diagrams.
- See page 82 for IC Pin Functions.



NOTE

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

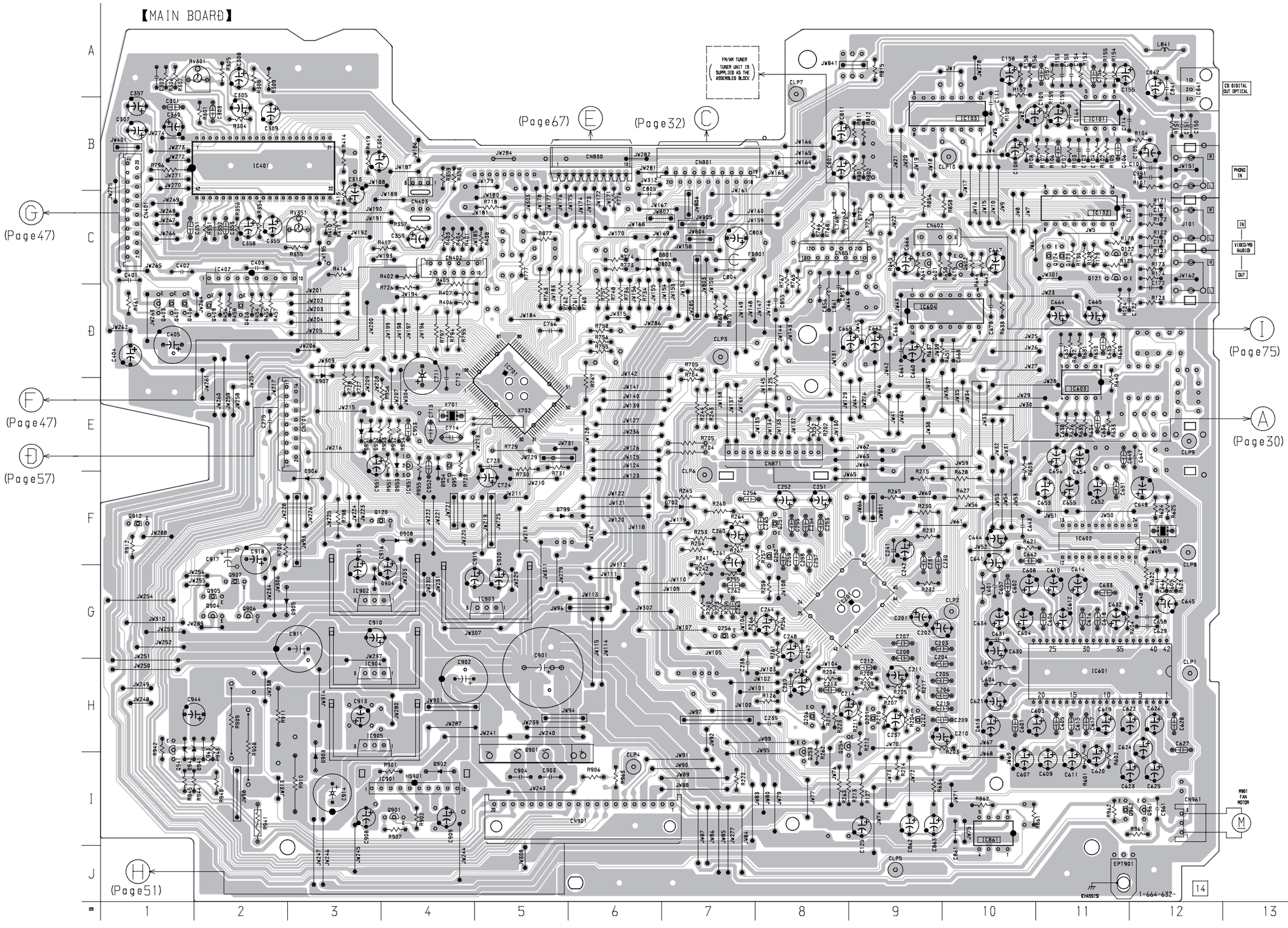
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: STOP
  ( ): PLAY
  * : can not be measured.

6-7. PRINTED WIRING BOARD – MAIN SECTION –

• See page 16 for Circuit Boards Location.

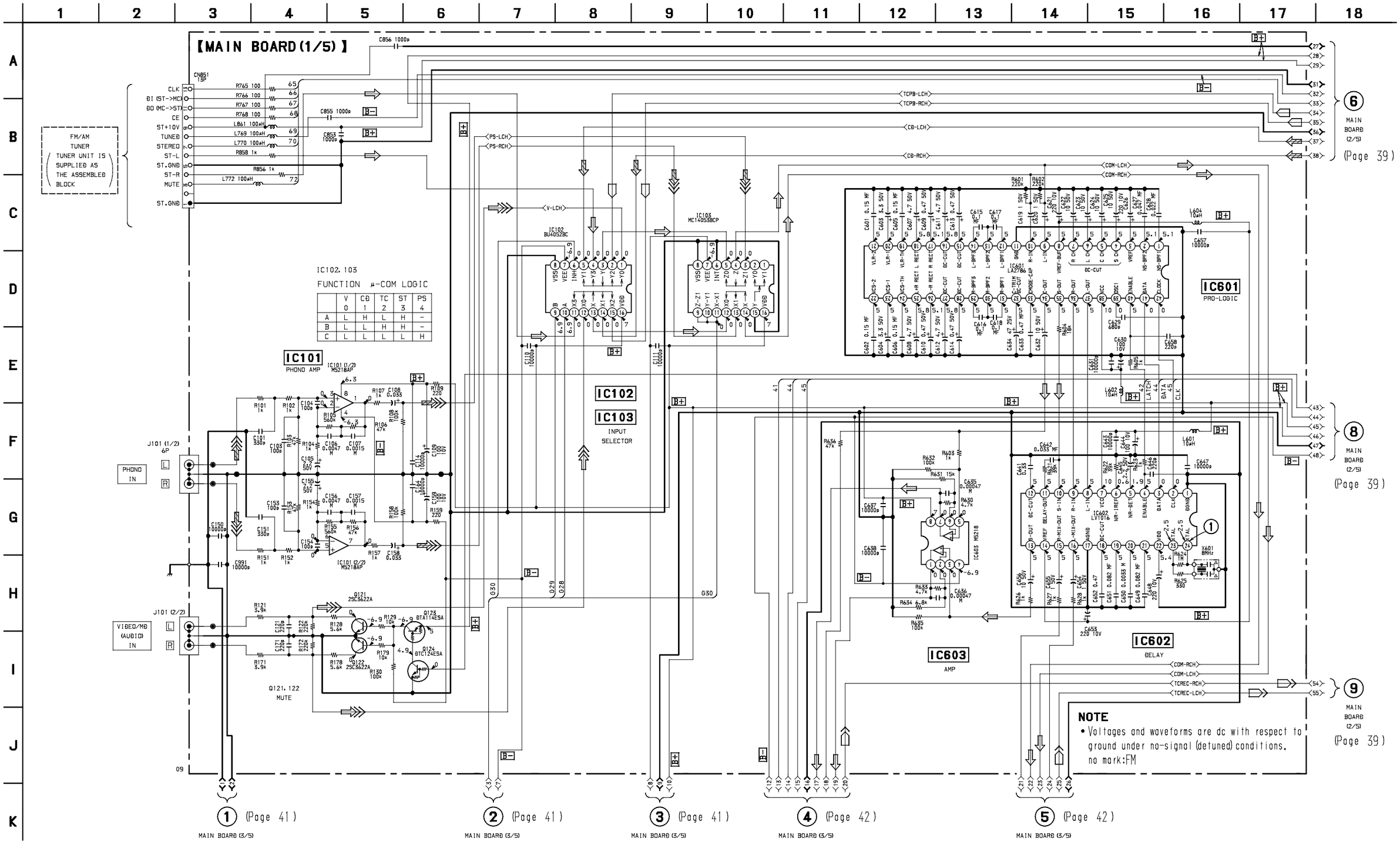
• **Semiconductor Location**

Ref. No.	Location
D702	F-7
D772	C-9
D799	F-5
D801	C-6
D802	C-6
D901	H-5
D902	I-4
D903	I-3
D905	G-2
D906	F-3
D907	D-3
D908	F-4
D941	H-1
D942	H-1
D951	E-3
D952	E-3
D953	E-4
D954	E-4
IC101	B-11
IC102	C-11
IC103	B-10
IC201	G-9
IC401	B-2
IC402	C-2
IC601	H-11
IC602	F-11
IC603	E-11
IC604	D-9
IC701	E-5
IC841	A-12
IC861	I-10
IC901	I-4
IC902	G-3
IC903	G-5
IC904	H-3
IC905	H-3
IC951	E-4
Q120	F-3
Q121	C-11
Q122	C-11
Q123	C-11
Q124	C-11
Q201	H-9
Q202	H-9
Q206	E-8
Q251	F-8
Q252	F-8
Q253	H-8
Q254	H-8
Q256	G-7
Q403	D-1
Q406	D-1
Q407	D-1
Q408	D-2
Q409	D-2
Q601	C-9
Q602	C-10
Q901	I-4
Q904	G-2
Q905	G-2
Q906	G-2
Q907	G-2
Q912	F-1
Q941	H-1
Q951	E-4
Q961	I-12
Q962	I-11



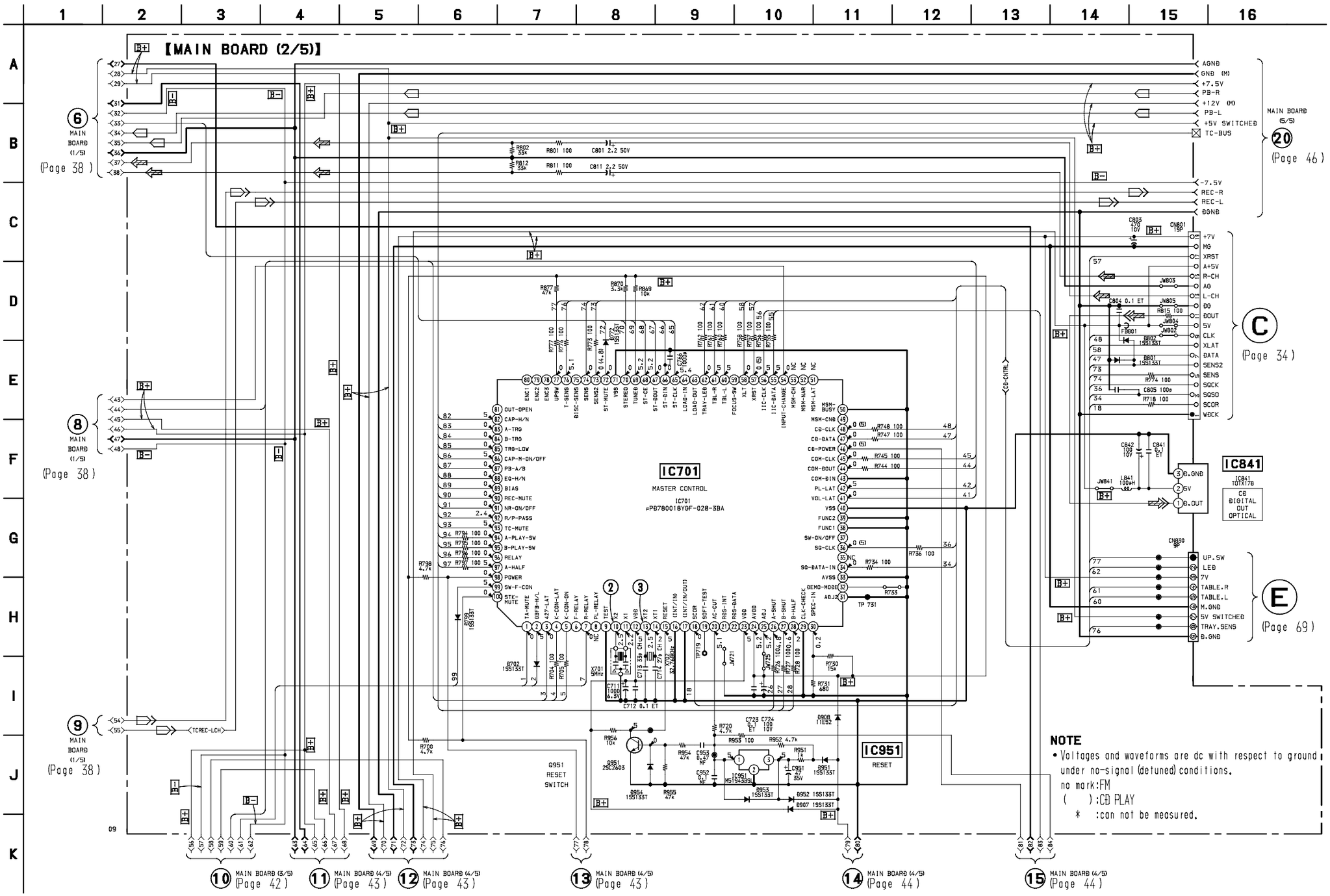
6-8. SCHEMATIC DIAGRAM – MAIN (1/5) SECTION –

- See page 28 for Waveforms.
- See page 79 for IC Block Diagrams.



6-9. SCHEMATIC DIAGRAM – MAIN (2/5) SECTION –

- See page 28 for Waveforms.
- See page 35 for Printed Wiring Board.
- See page 88 for IC Pin Functions.

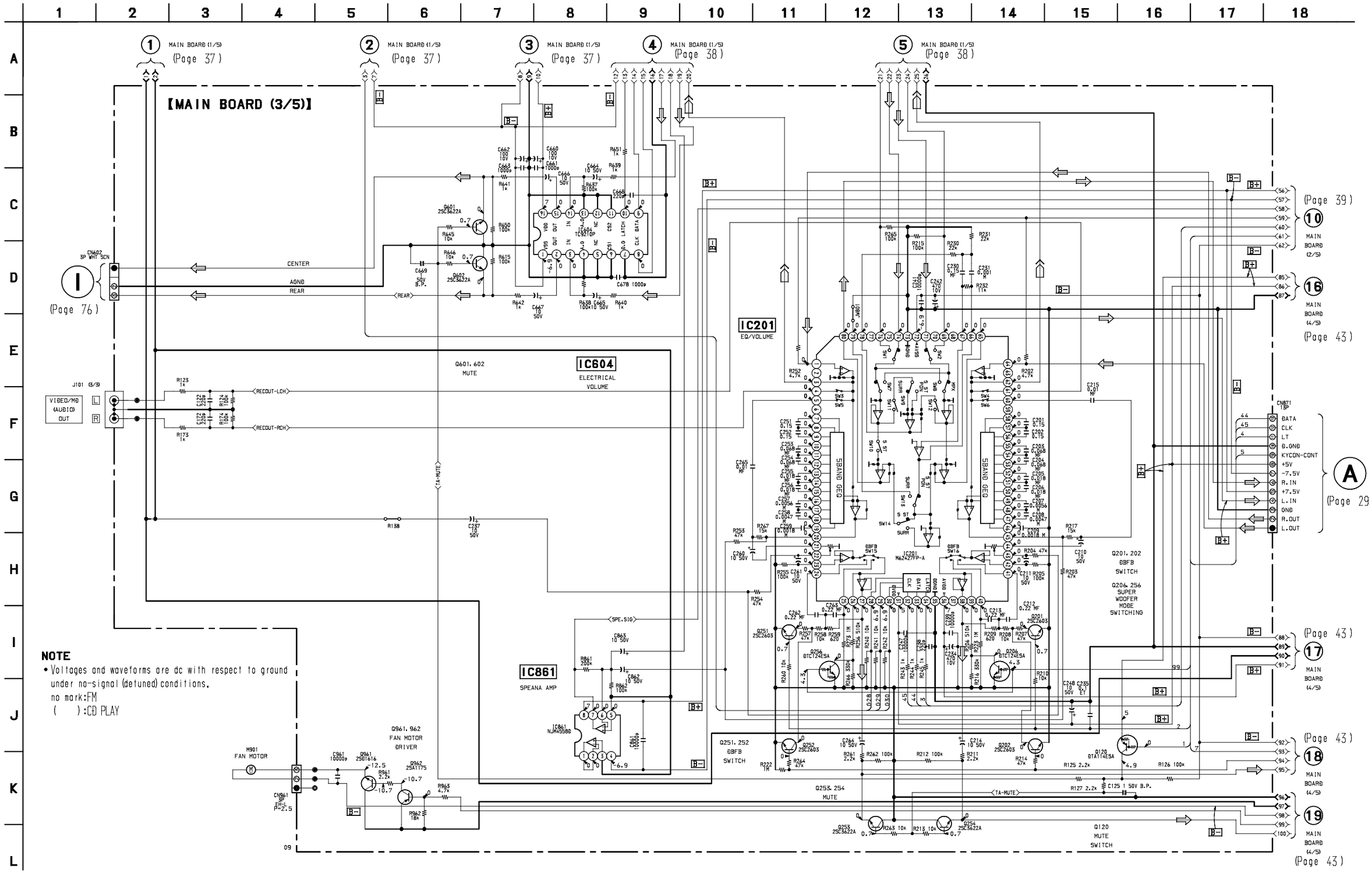


NOTE

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark: FM
  ( ): CD PLAY
  * : can not be measured.

6-10. SCHEMATIC DIAGRAM – MAIN (3/5) SECTION –

• See page 35 for Printed Wiring Board.

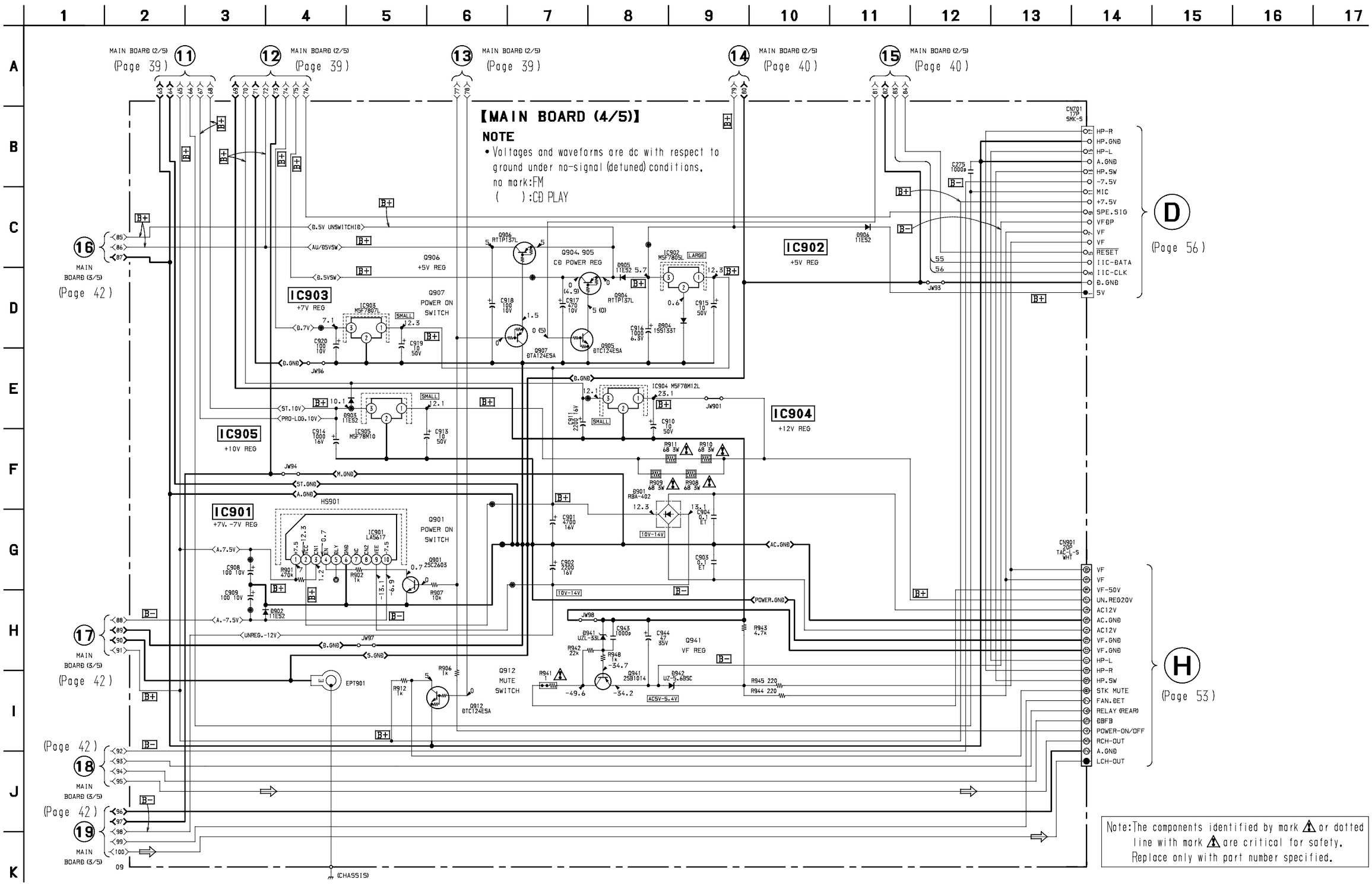


NOTE

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark: FM
  ( ): CD PLAY

6-11. SCHEMATIC DIAGRAM – MAIN (4/5) SECTION –

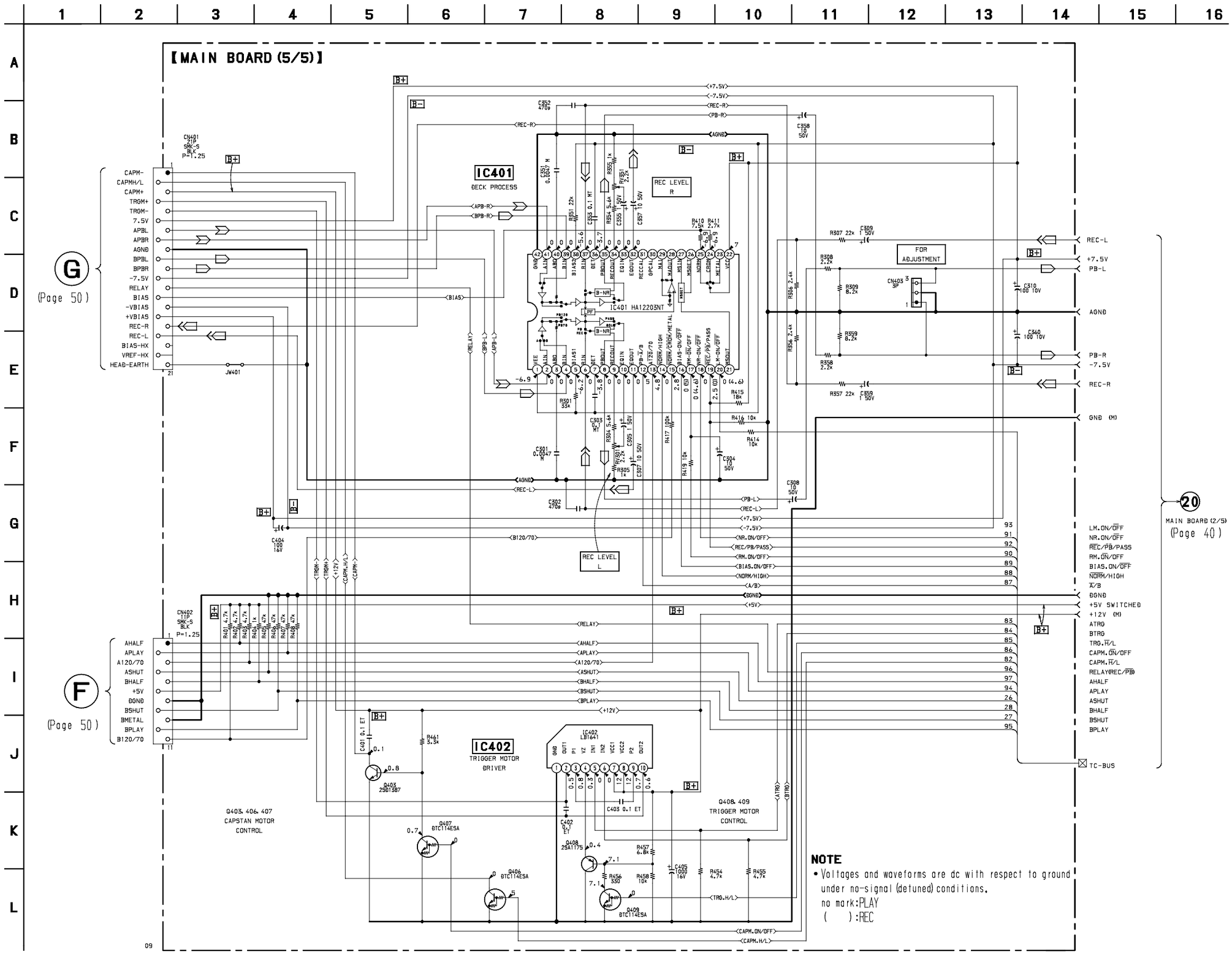
• See page 35 for Printed Wiring Board.



Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

6-12. SCHEMATIC DIAGRAM – MAIN (5/5) SECTION –

- See page 35 for Printed Wiring Board.
- See page 79 for IC Block Diagrams.



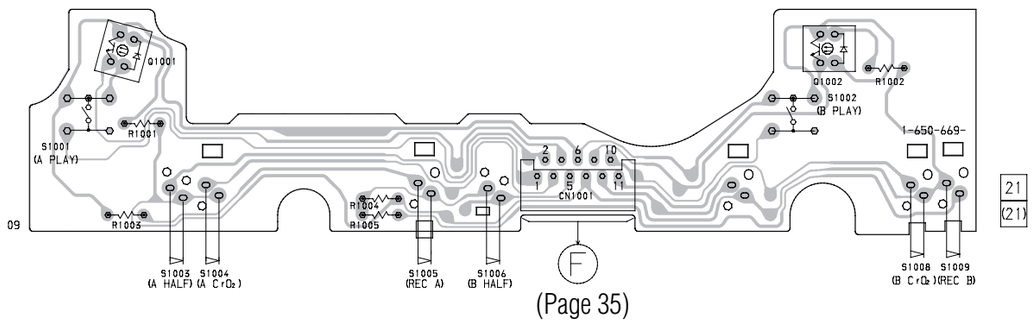
NOTE

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark:PLAY
  ( ):REC

6-13. PRINTED WIRING BOARD – DECK SECTION –

• See page 16 for Circuit Boards Location.

【LEAF SWITCH BOARD】



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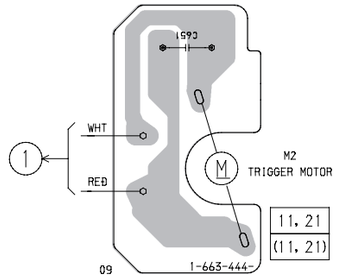
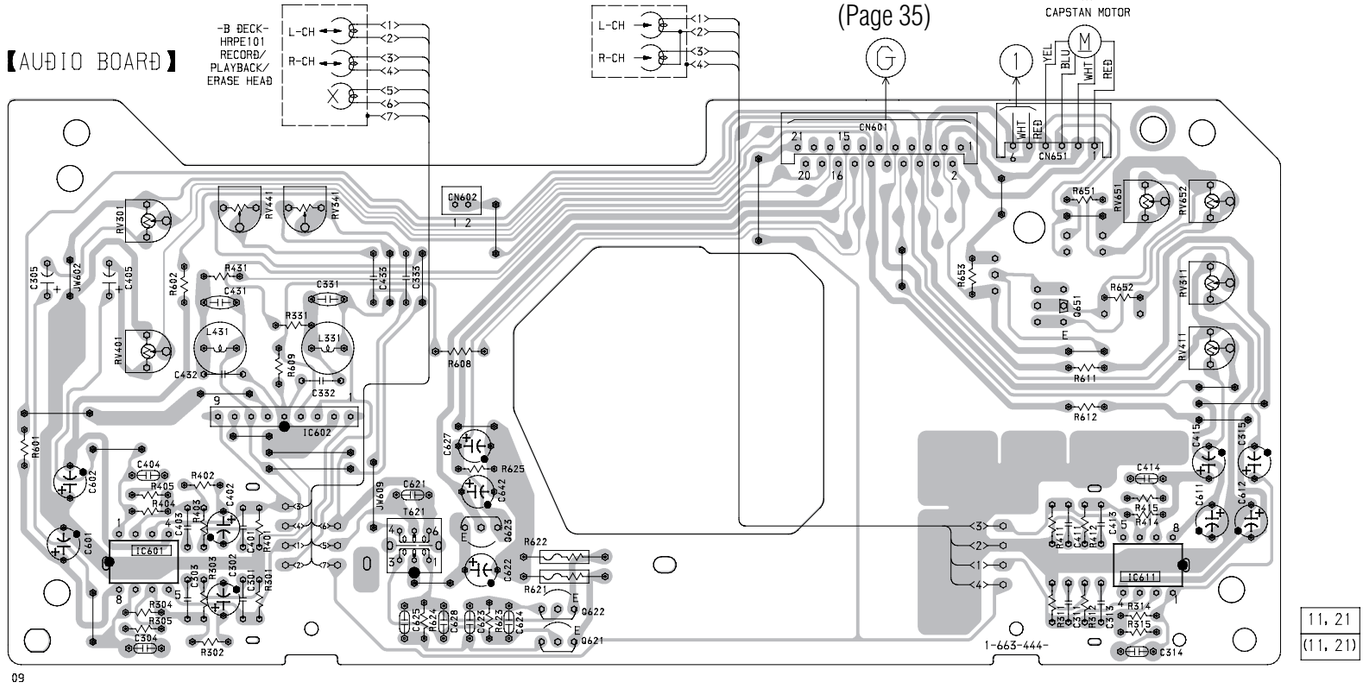
【MOTOR BOARD】

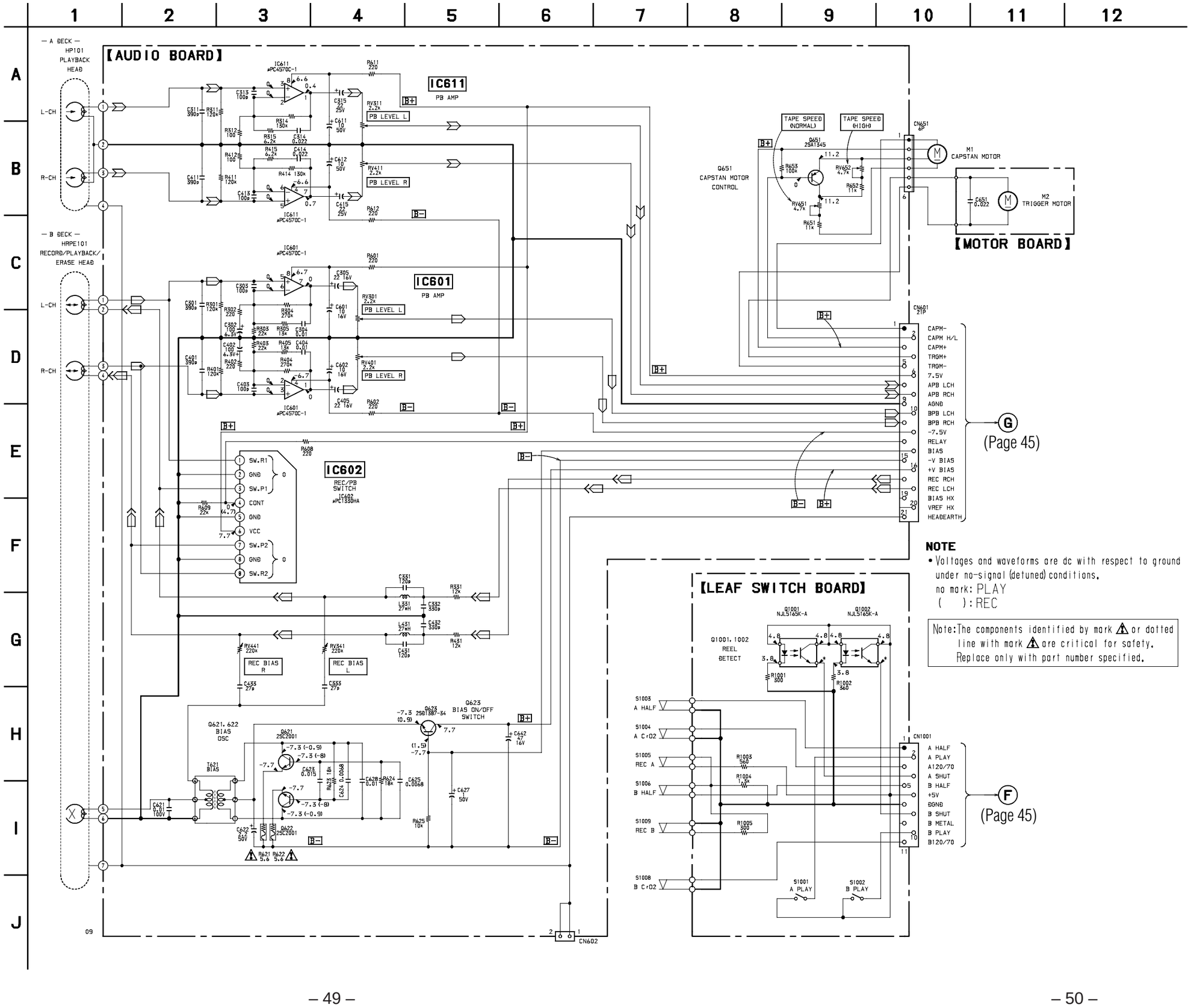


【AUDIO BOARD】



6-14. SCHEMATIC DIAGRAM – DECK SECTION –

• See page 81 for IC Block Diagrams.



NOTE

• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark: PLAY
( ): REC

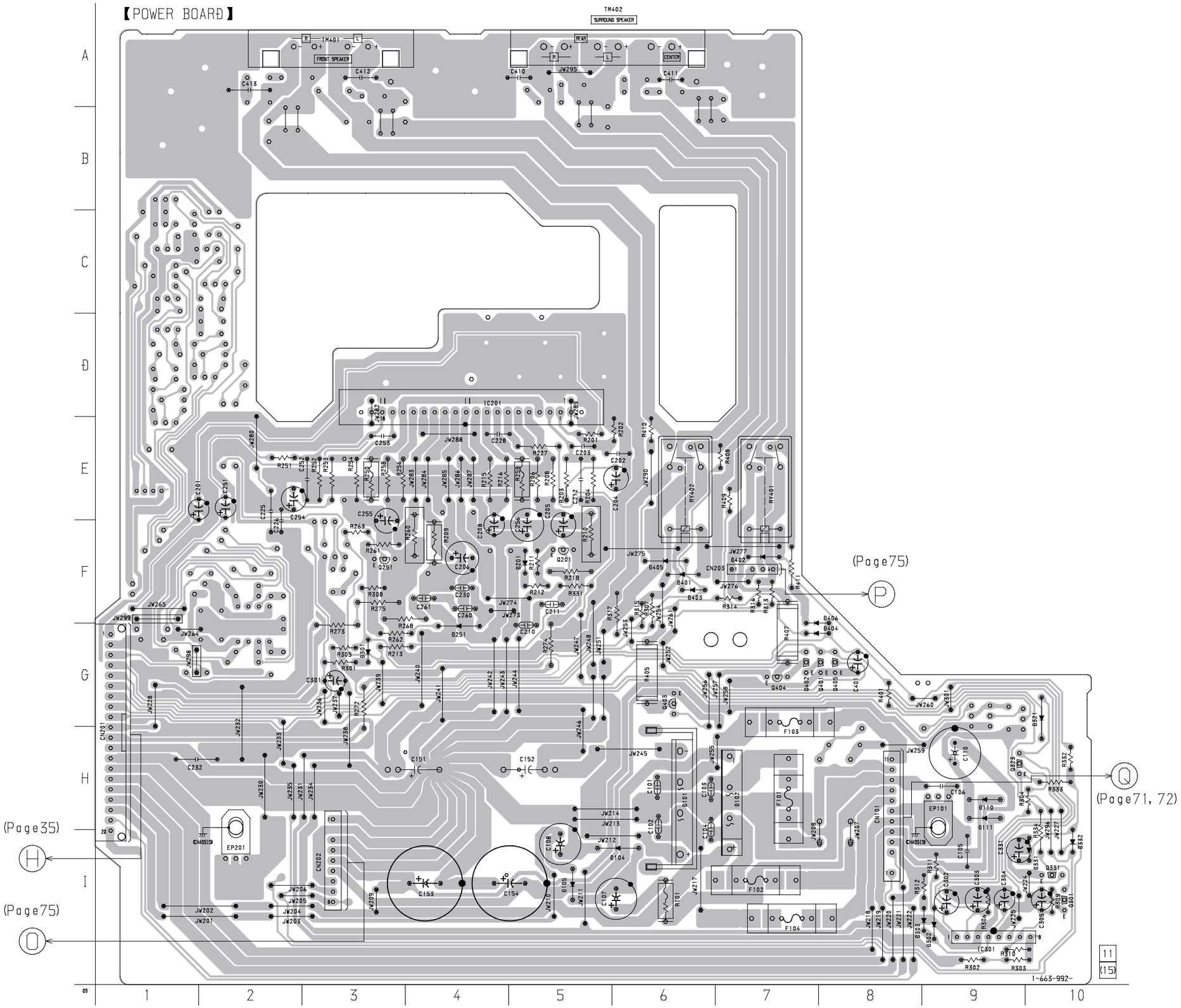
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

6-15. PRINTED WIRING BOARD – POWER SECTION –

• See page 16 for Circuit Boards Location.

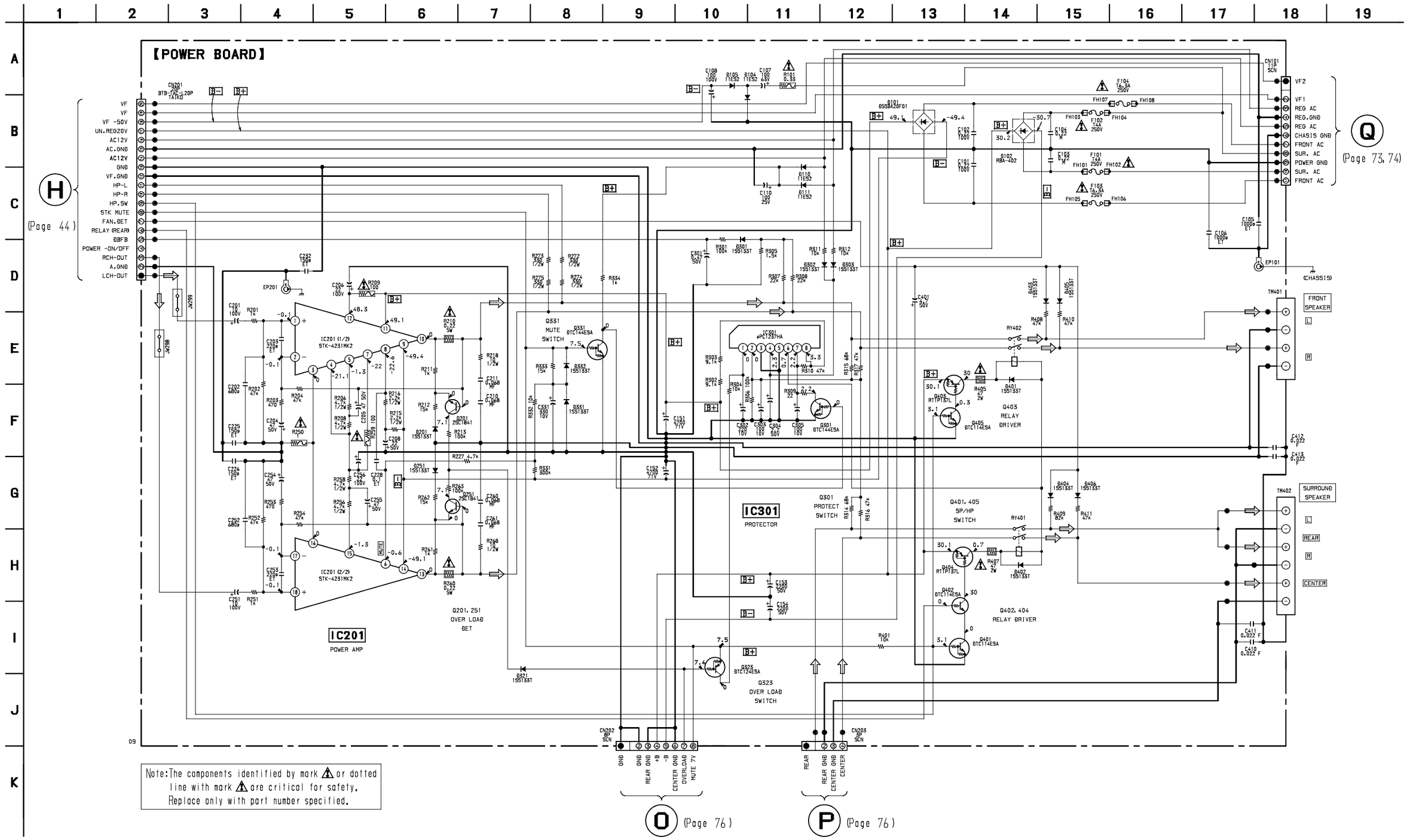
• **Semiconductor Location**

Ref. No.	Location
D101	H-6
D102	H-7
D104	I-6
D105	I-5
D110	H-9
D111	H-9
D201	F-5
D251	G-4
D301	G-3
D302	I-9
D303	I-9
D321	G-10
D331	I-10
D332	I-10
D401	F-6
D402	F-7
D403	F-6
D404	G-8
D405	F-6
D406	F-8
IC201	D-4
IC301	I-9
Q201	F-5
Q251	F-3
Q301	I-10
Q323	H-9
Q331	I-10
Q401	G-8
Q402	G-7
Q403	G-6
Q404	G-7
Q405	G-8



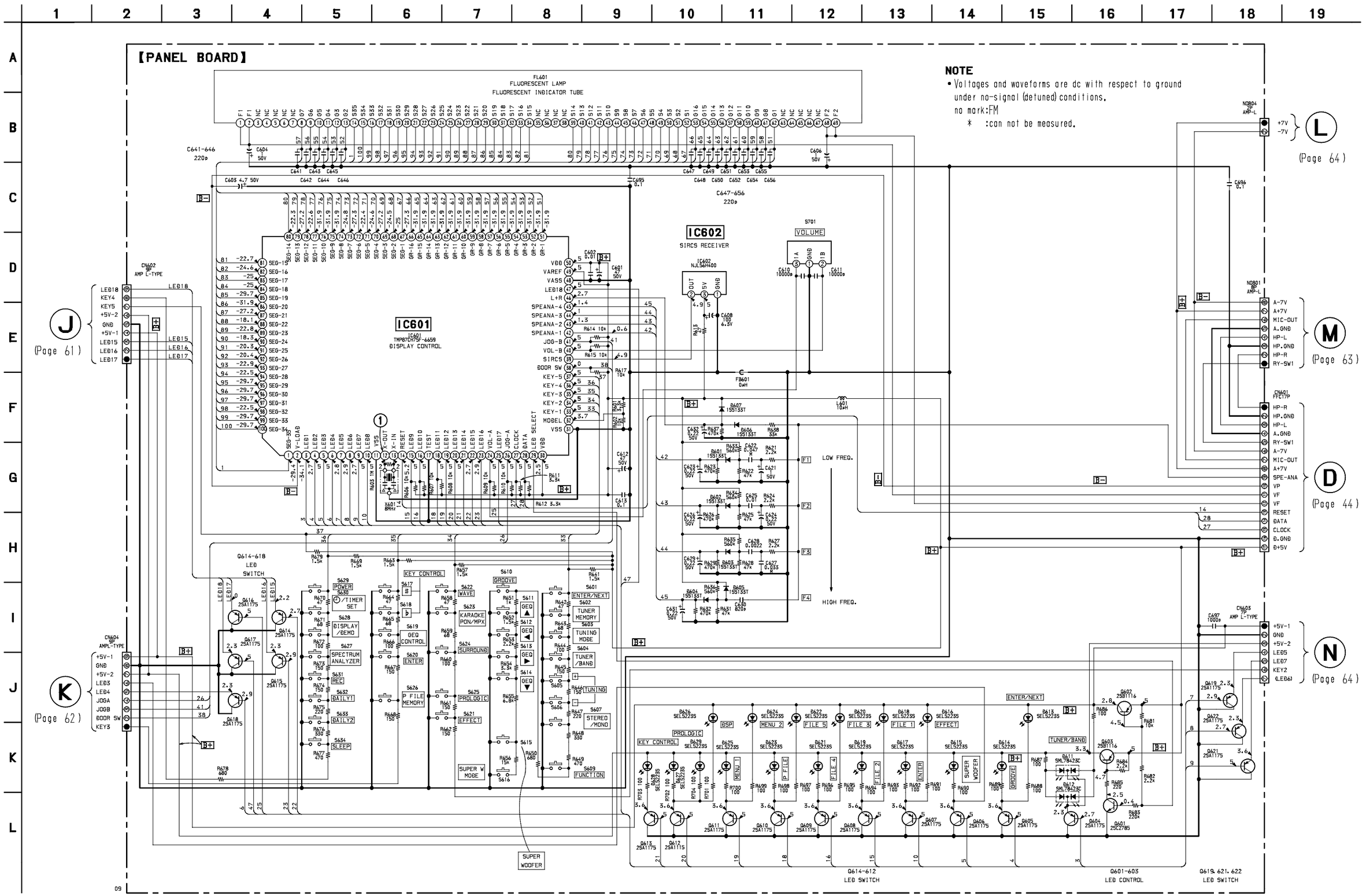
6-16. SCHEMATIC DIAGRAM – POWER SECTION –

• See page 81 for IC Block Diagrams.



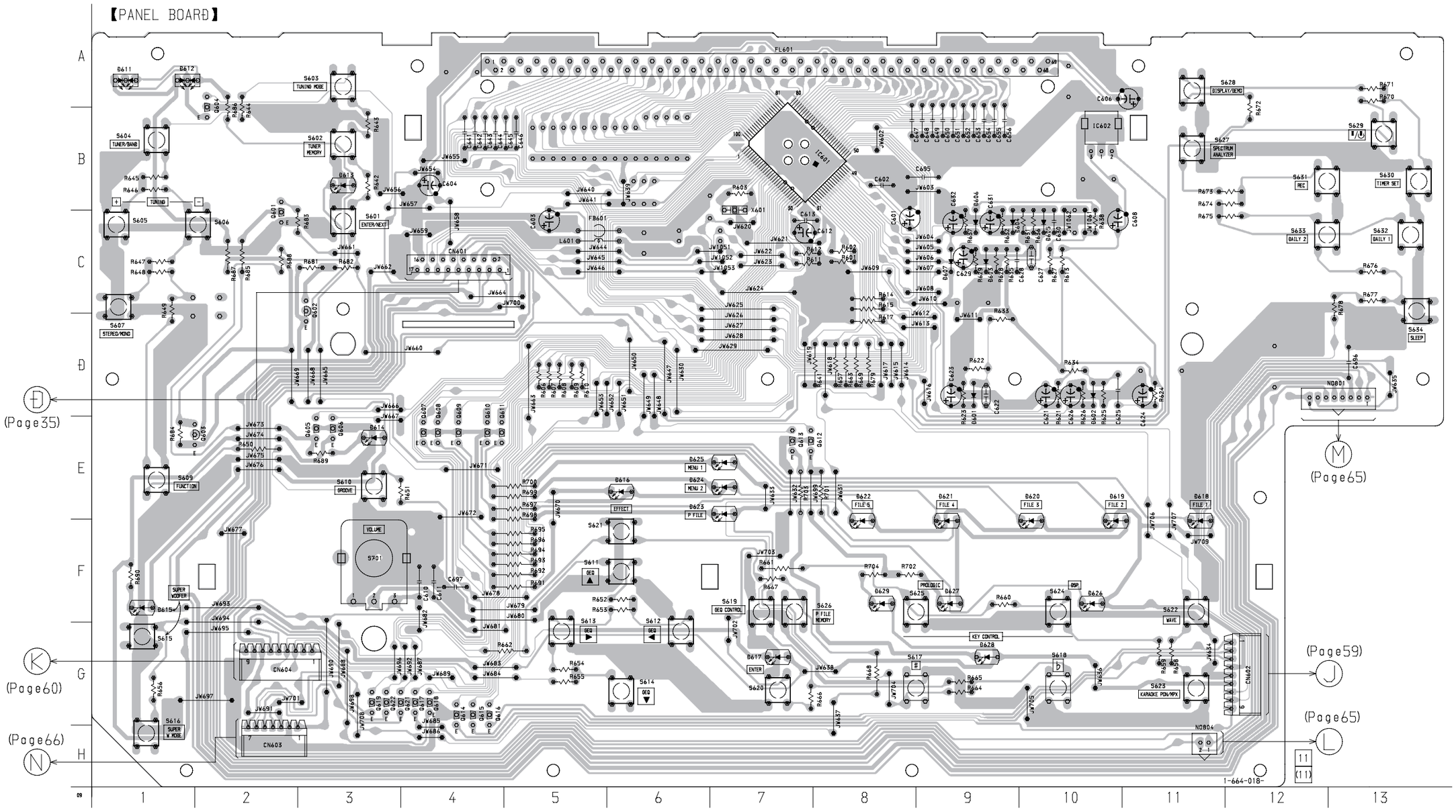
6-17. SCHEMATIC DIAGRAM – PANEL SECTION –

- See page 28 for Waveforms.
- See page 87 for IC Pin Functions.



6-18. PRINTED WIRING BOARD – PANEL SECTION –

• See page 16 for Circuit Boards Location.



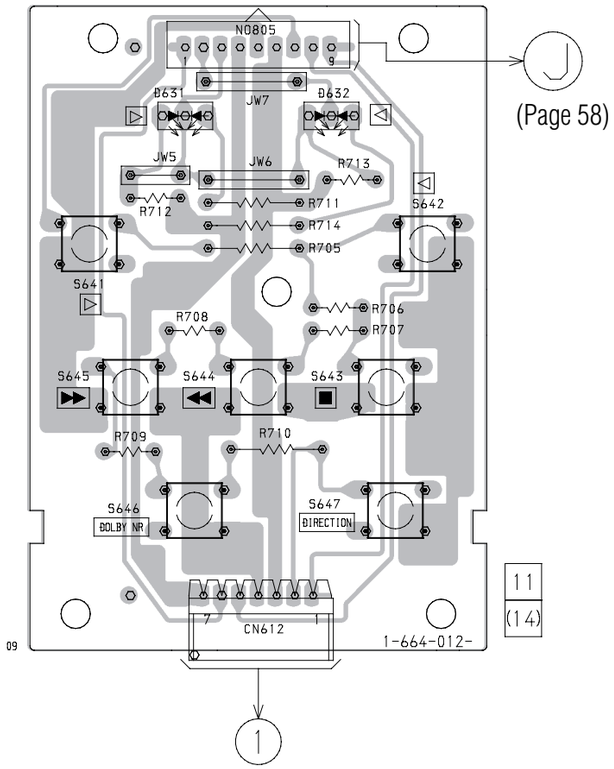
• **Semiconductor Location**

Ref. No.	Location
D601	D-9
D602	D-10
D603	C-9
D604	C-9
D605	C-10
D606	C-9
D607	C-9
D611	A-1
D612	A-1
D613	B-3
D614	E-3
D615	F-1
D616	E-6
D617	G-7
D618	E-11
D619	E-10
D620	E-10
D621	E-9
D622	E-8
D623	E-7
D624	E-7
D625	E-7
D626	F-10
D627	F-9
D628	G-9
D629	F-8
IC601	B-7
IC602	B-10
Q601	C-2
Q602	C-3
Q603	E-2
Q604	B-2
Q605	E-3
Q606	E-3
Q607	E-4
Q608	E-4
Q609	E-4
Q610	E-4
Q611	E-4
Q612	E-7
Q613	E-7
Q614	G-4
Q615	G-4
Q616	G-4
Q617	G-4
Q618	G-4
Q619	G-3
Q621	G-4
Q622	G-3

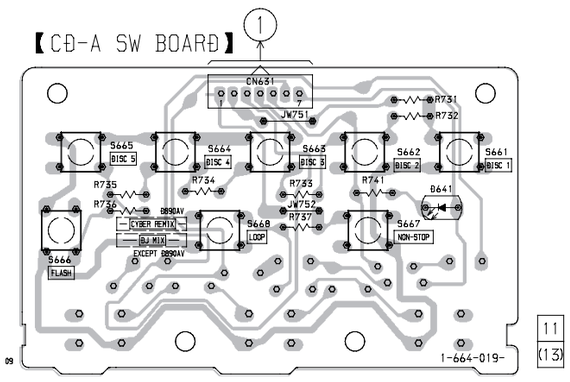
6-19. PRINTED WIRING BOARD – TC/CD PANEL-1 SECTION –

• See page 16 for Circuit Boards Location.

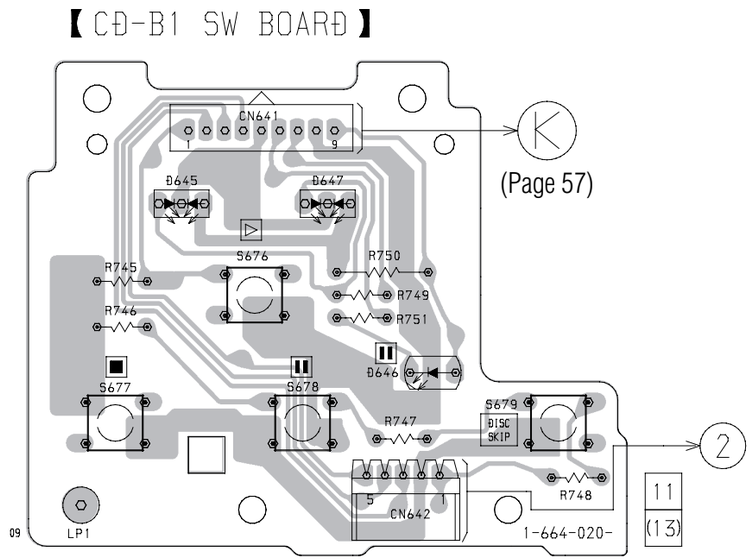
【TC-A SW BOARD】



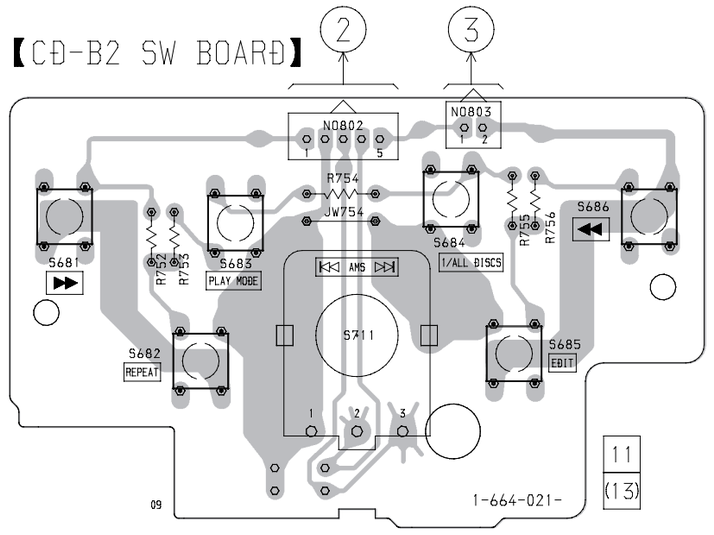
【CD-A SW BOARD】



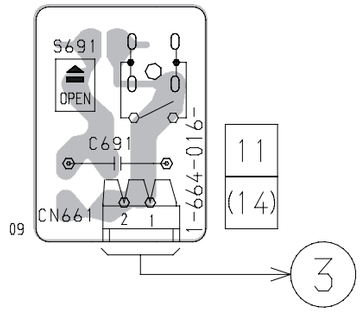
【CD-B1 SW BOARD】



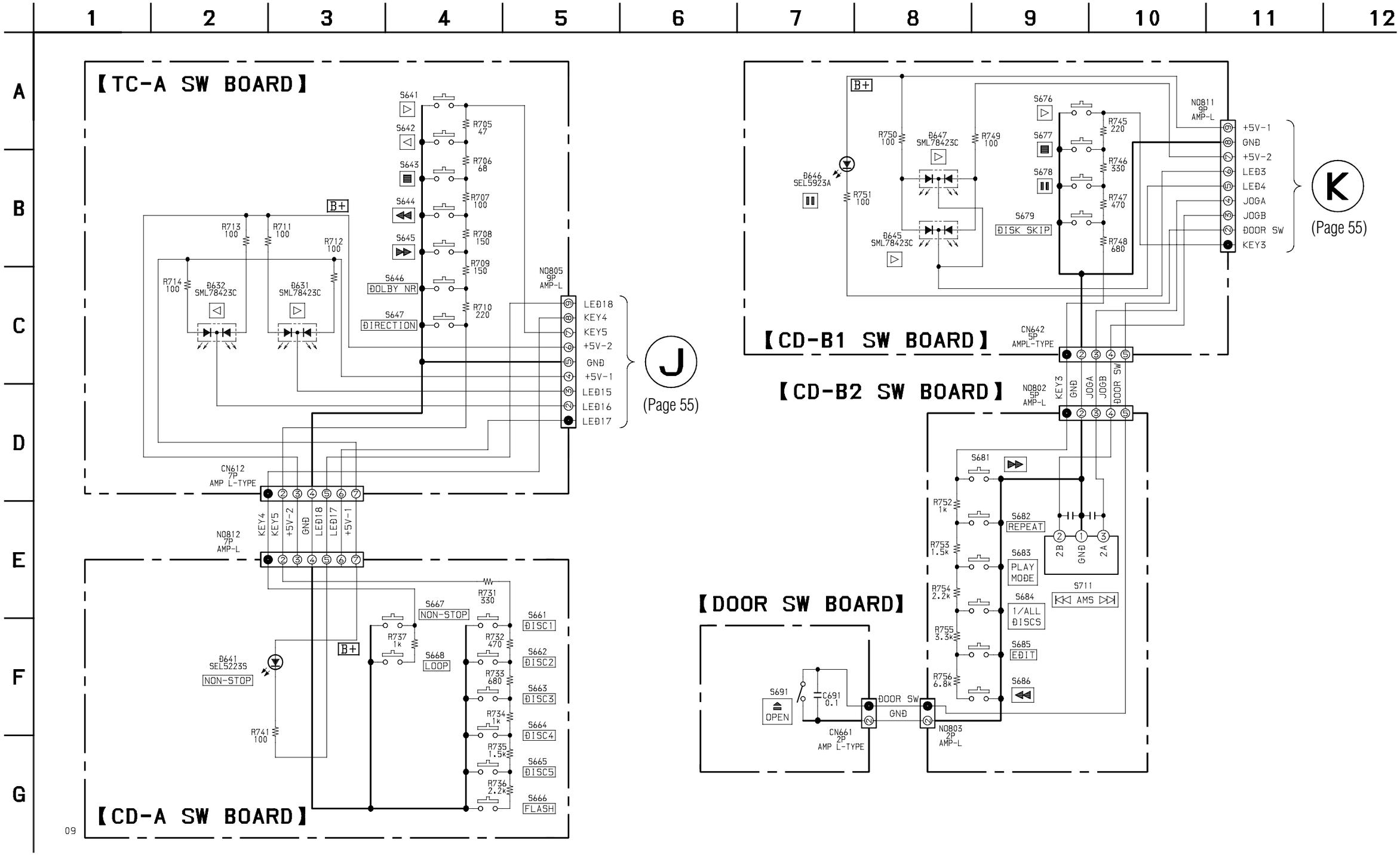
【CD-B2 SW BOARD】



【DOOR SW BOARD】

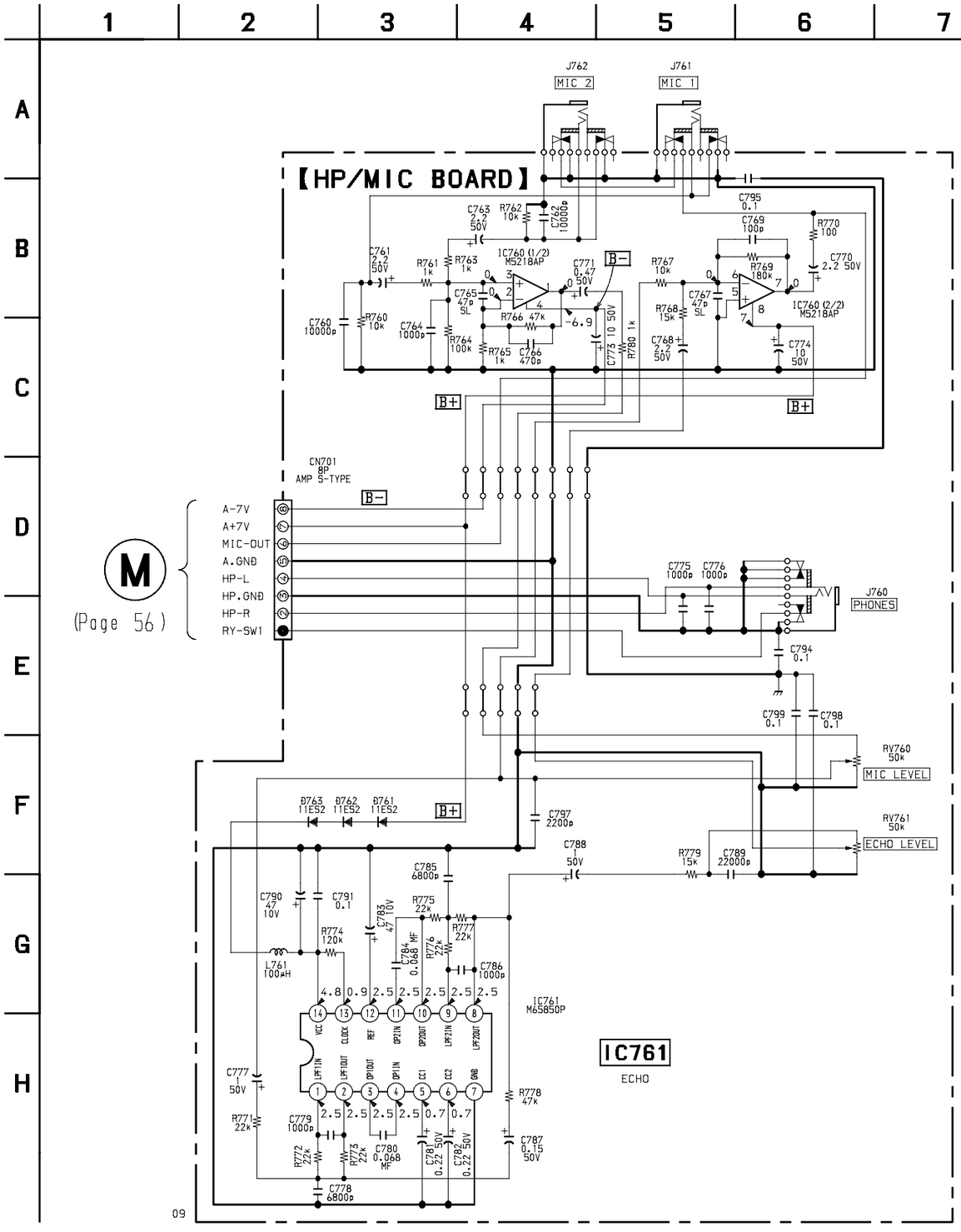


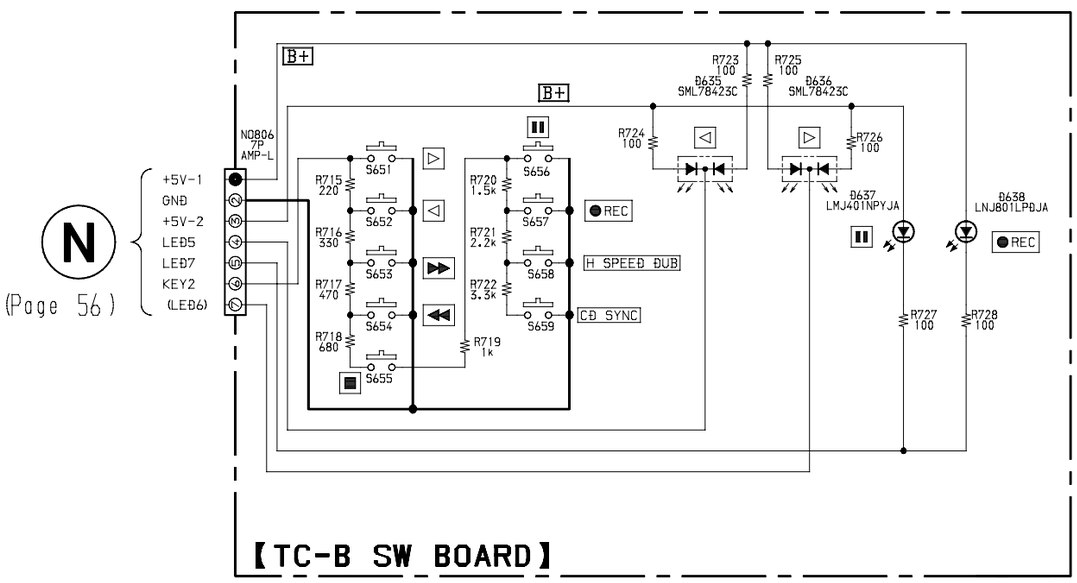
6-20. SCHEMATIC DIAGRAM – TC/CD PANEL-1 SECTION –

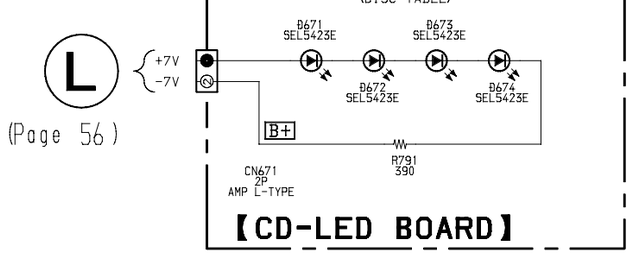


6-21. SCHEMATIC DIAGRAM – HP/MIC SECTION –

• See page 81 for IC Block Diagrams.







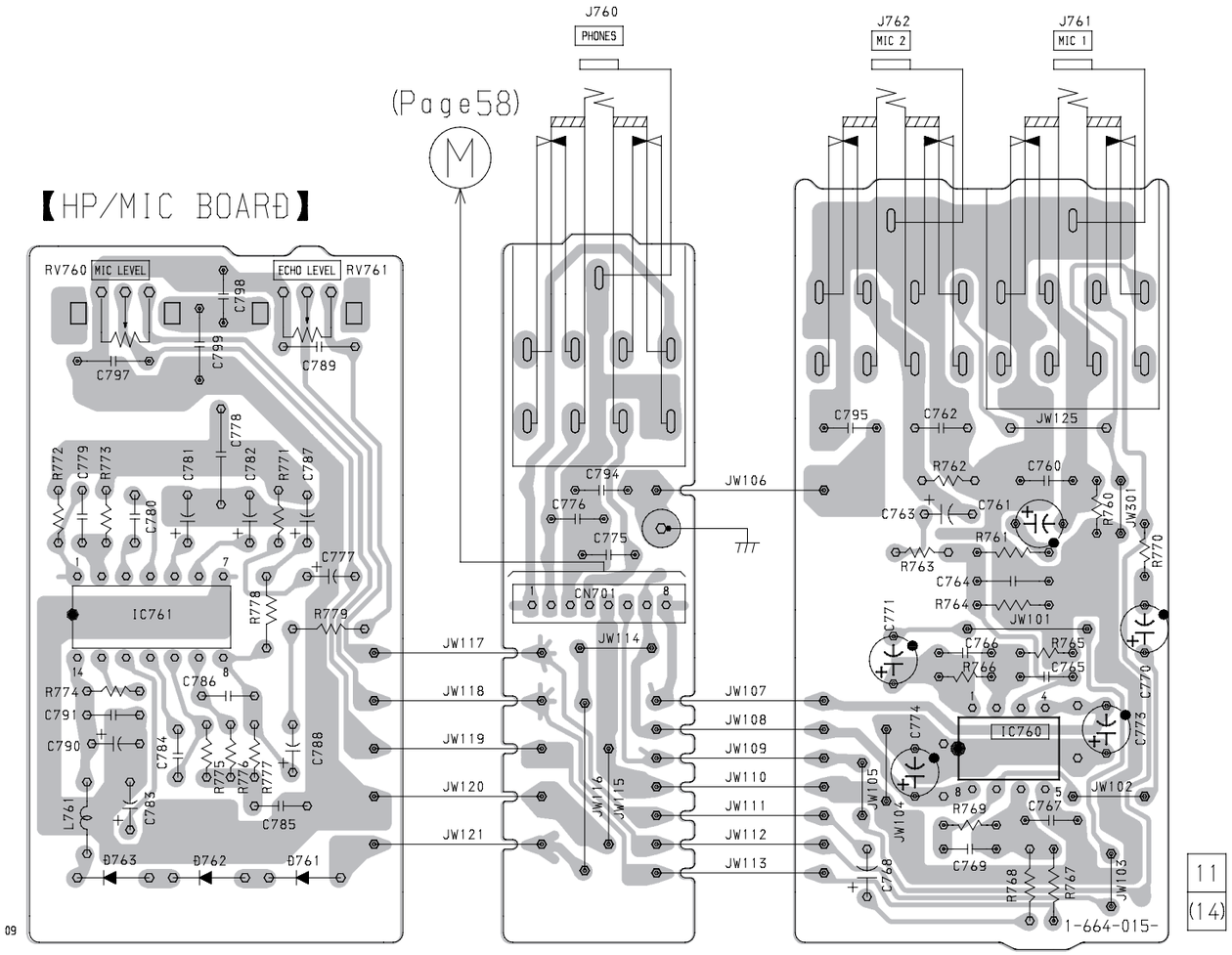
NOTE

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark:FM

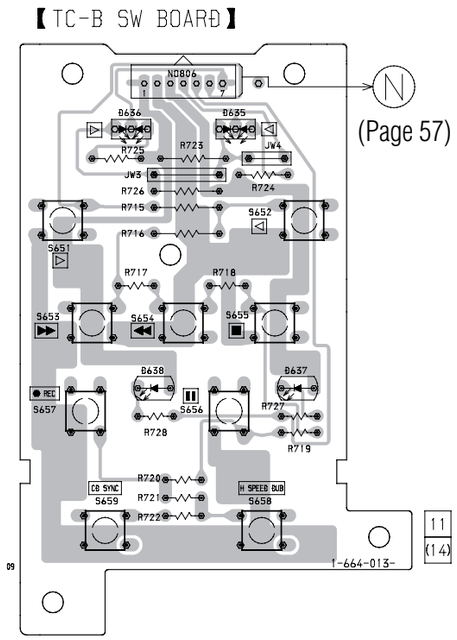
6-22. PRINTED WIRING BOARD – HP/MIC SECTION –

• See page 16 for Circuit Boards Location.

【HP/MIC BOARD】



【TC-B SW BOARD】

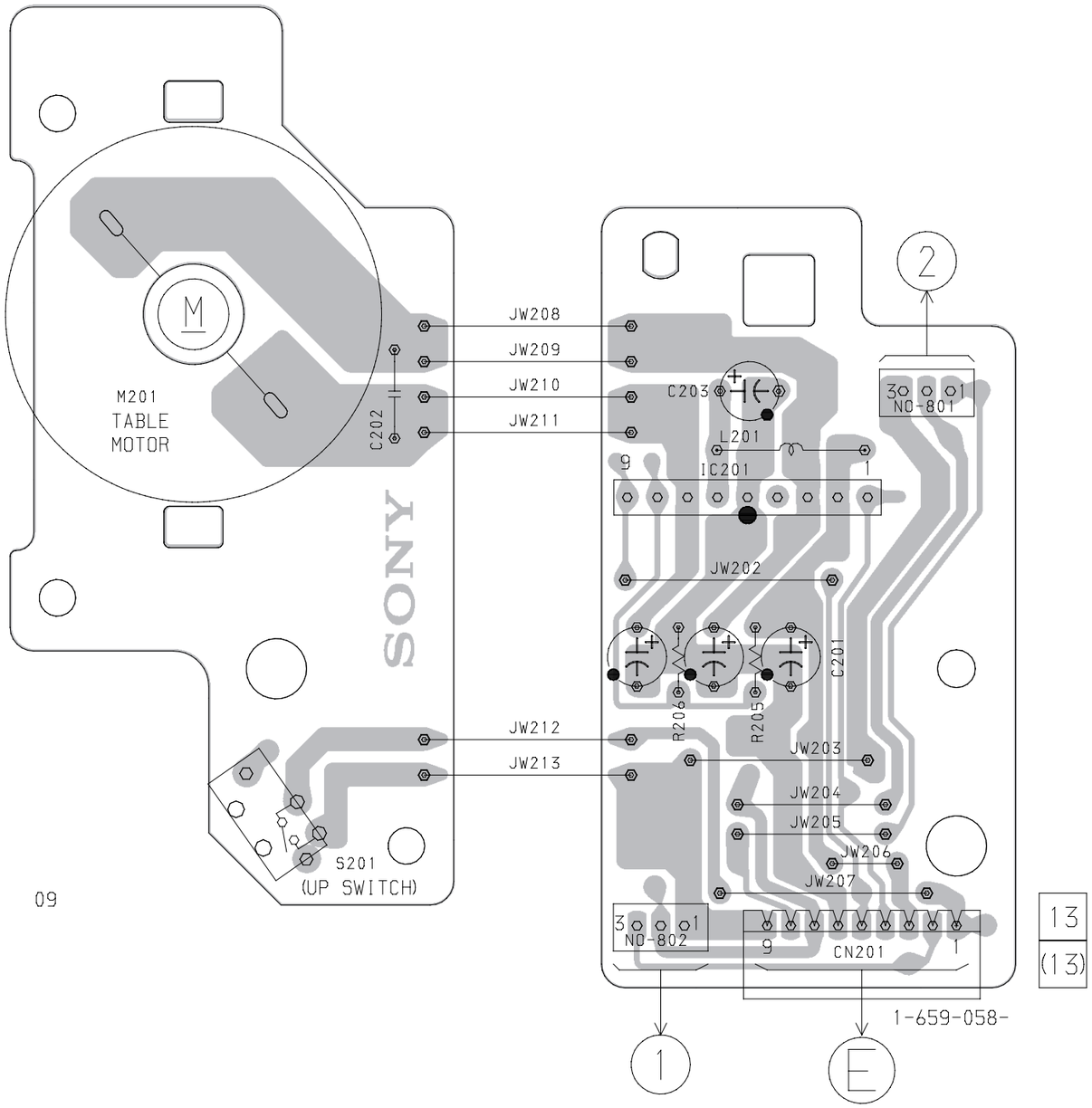


【CD LED BOARD】

6-23. PRINTED WIRING BOARD – CD MOTOR SECTION –

• See page 16 for Circuit Boards Location.

【CD MOTOR BOARD】



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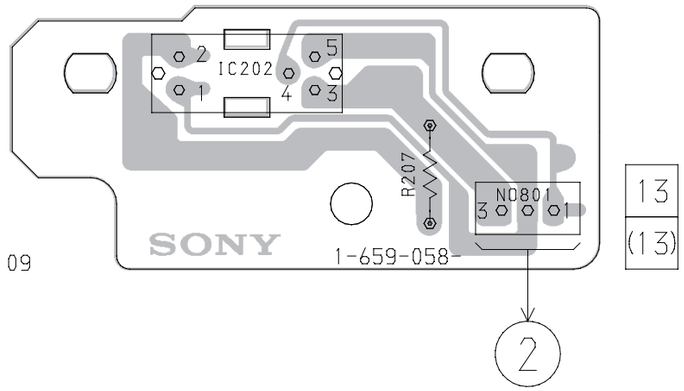
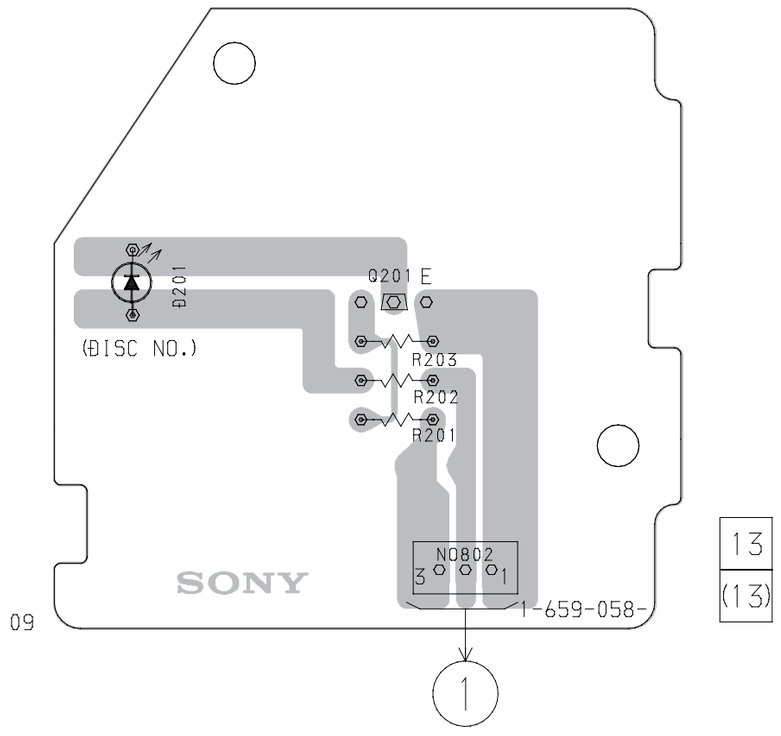
【TABLE SENSOR BOARD】

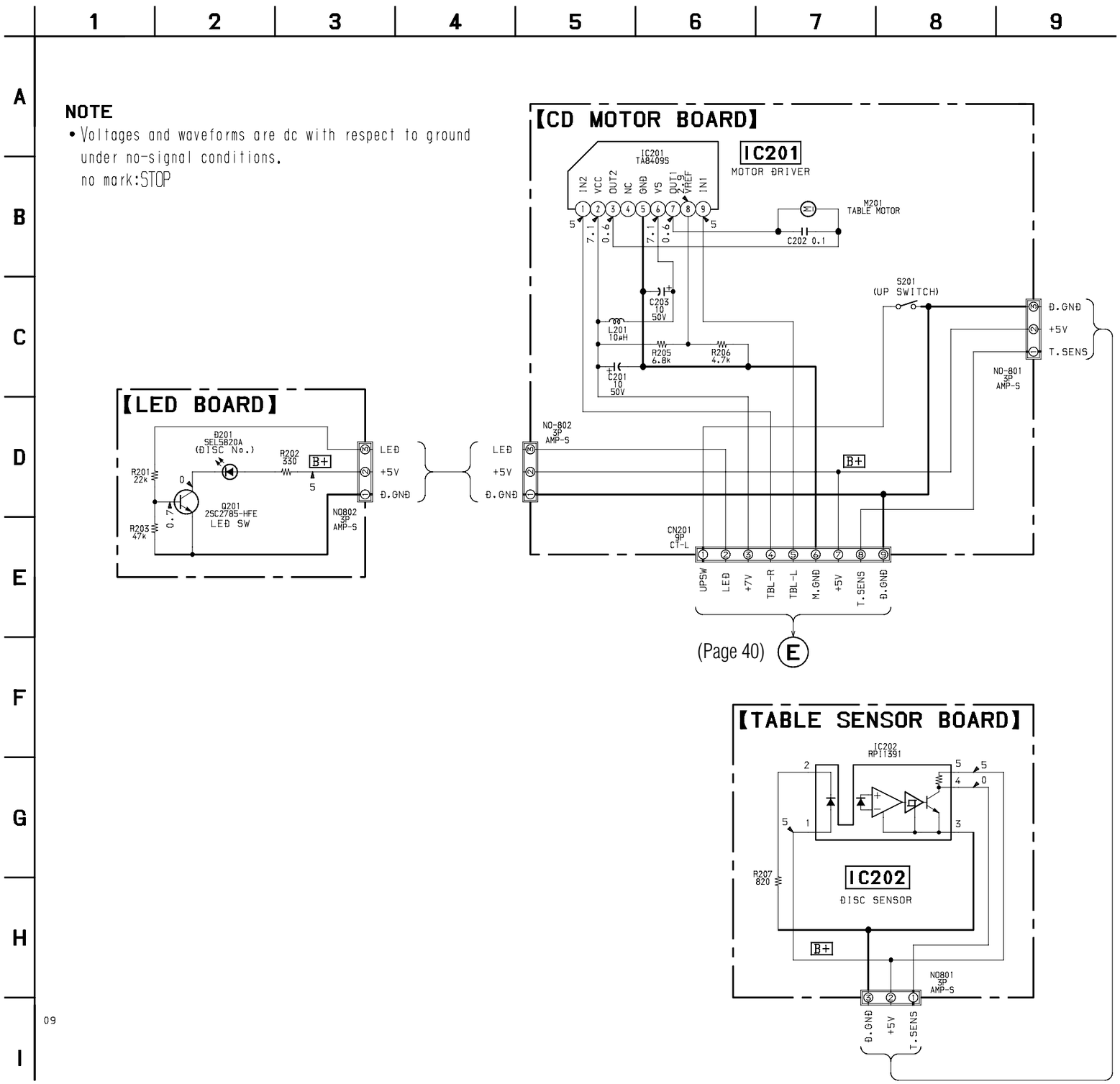


【LED BOARD】



6-24. SCHEMATIC DIAGRAM – CD MOTOR SECTION –

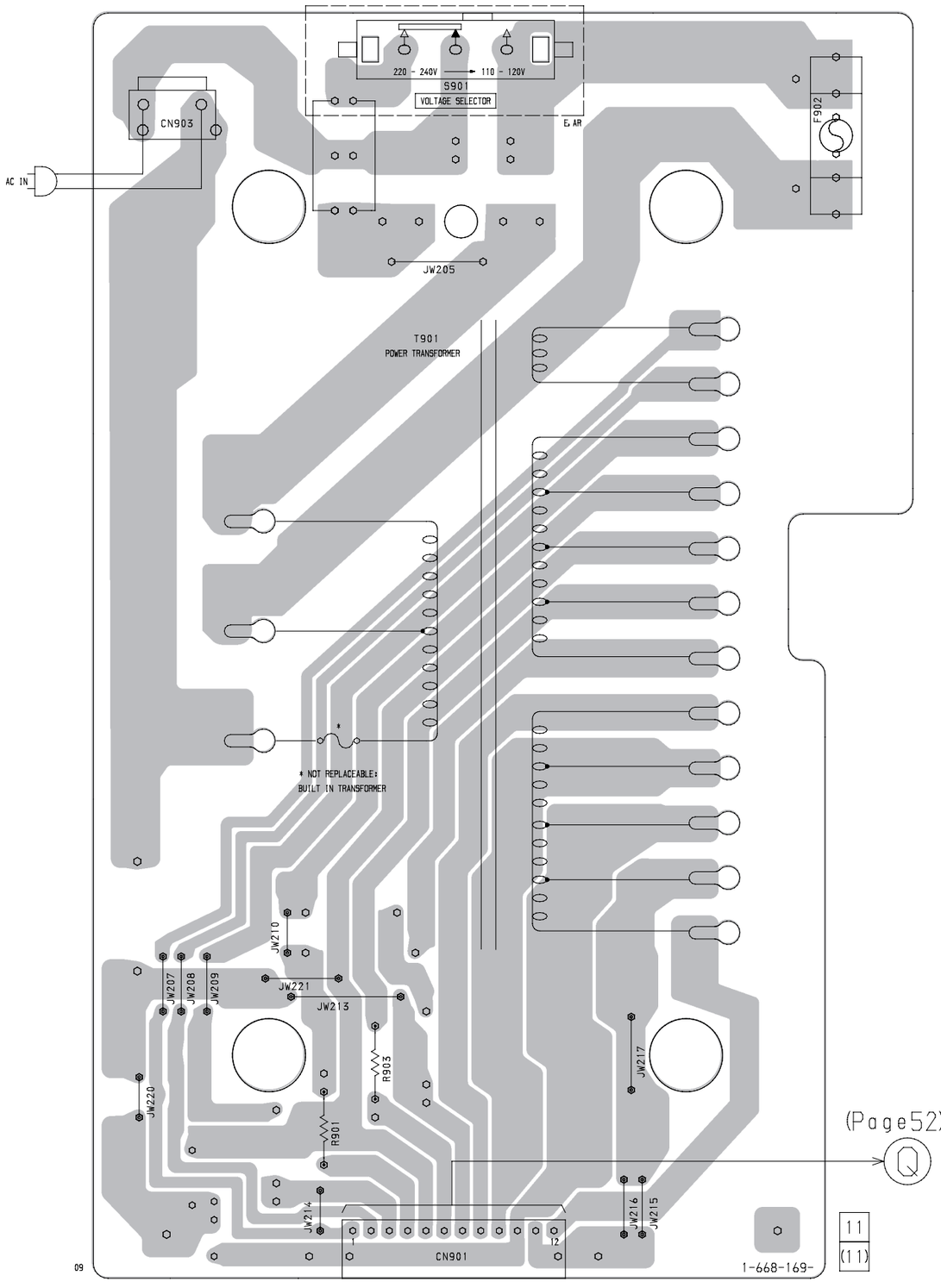
• See page 81 for IC Block Diagrams.



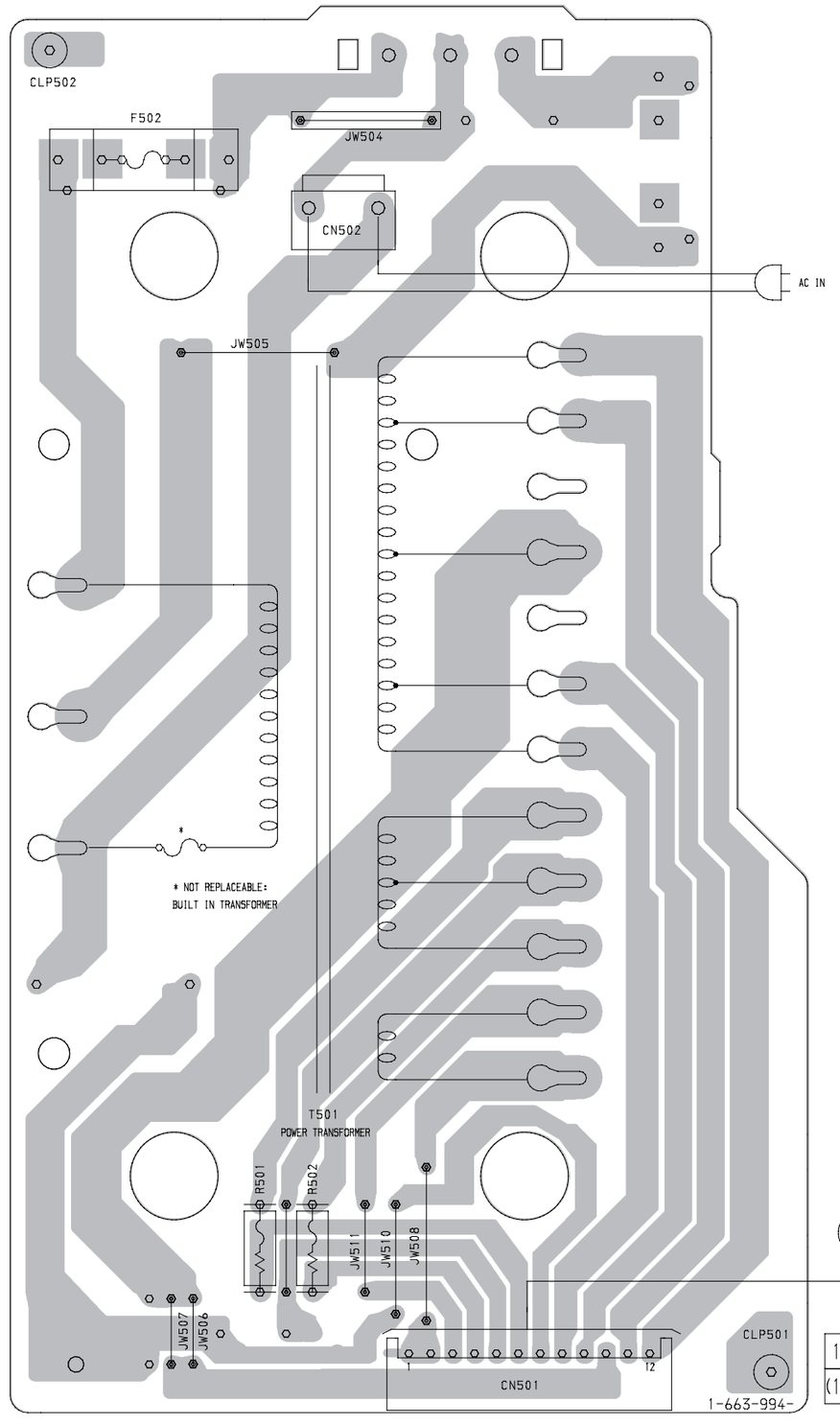
6-25. PRINTED WIRING BOARD – TRANS SECTION –

• See page 16 for Circuit Boards Location.

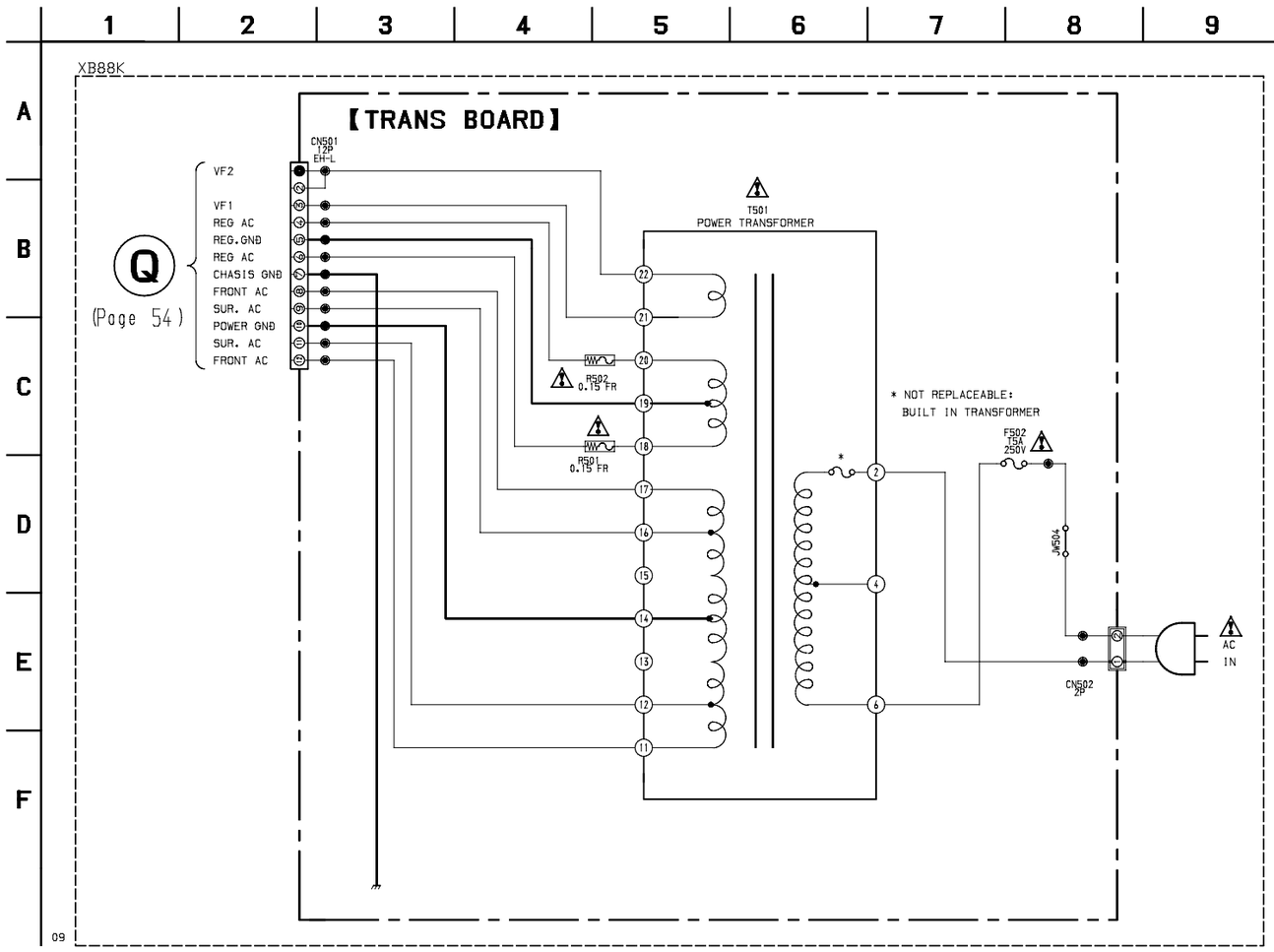
【TRANS BORAĐ】(XB88AVK)

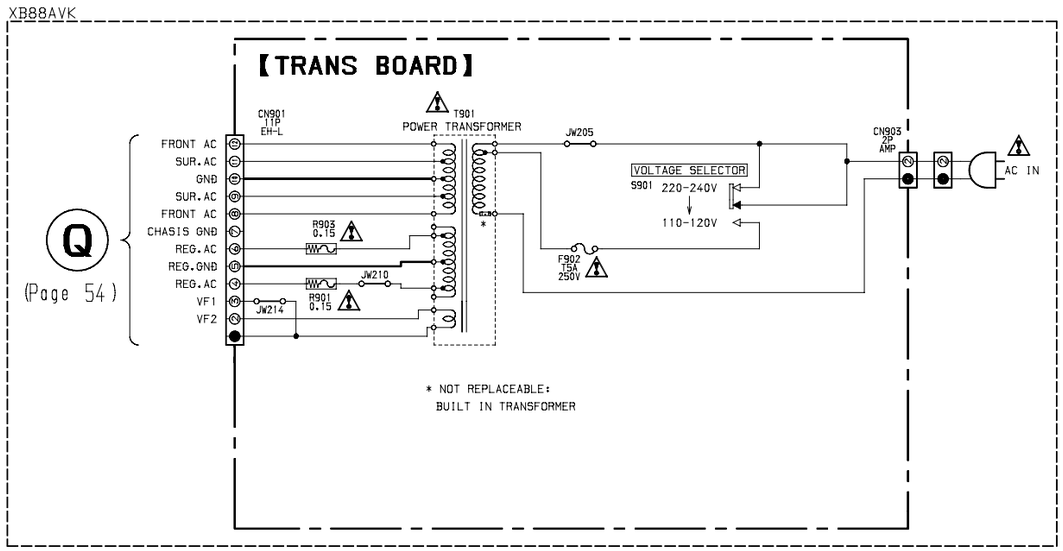


【TRANS BOARĐ】(XB88K)



6-26. SCHEMATIC DIAGRAM – TRANS SECTION –

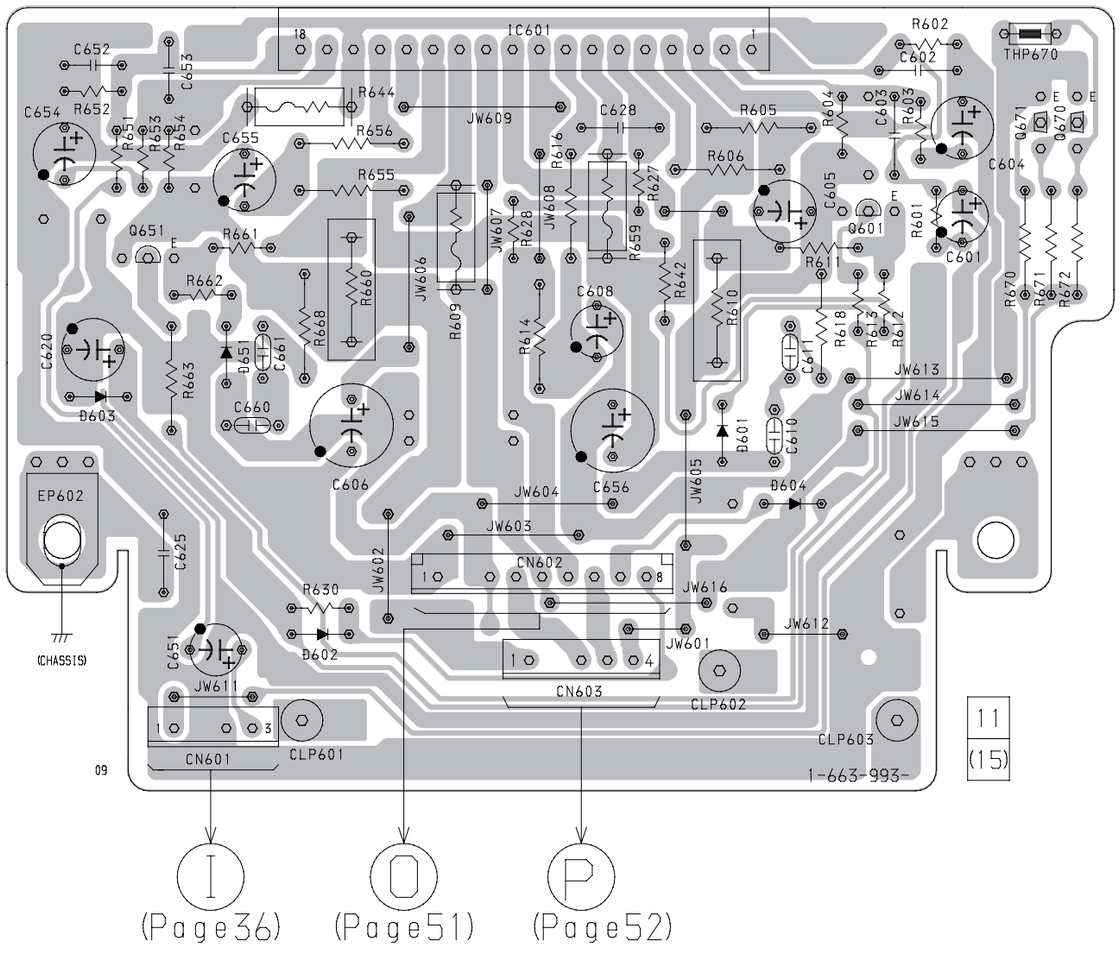




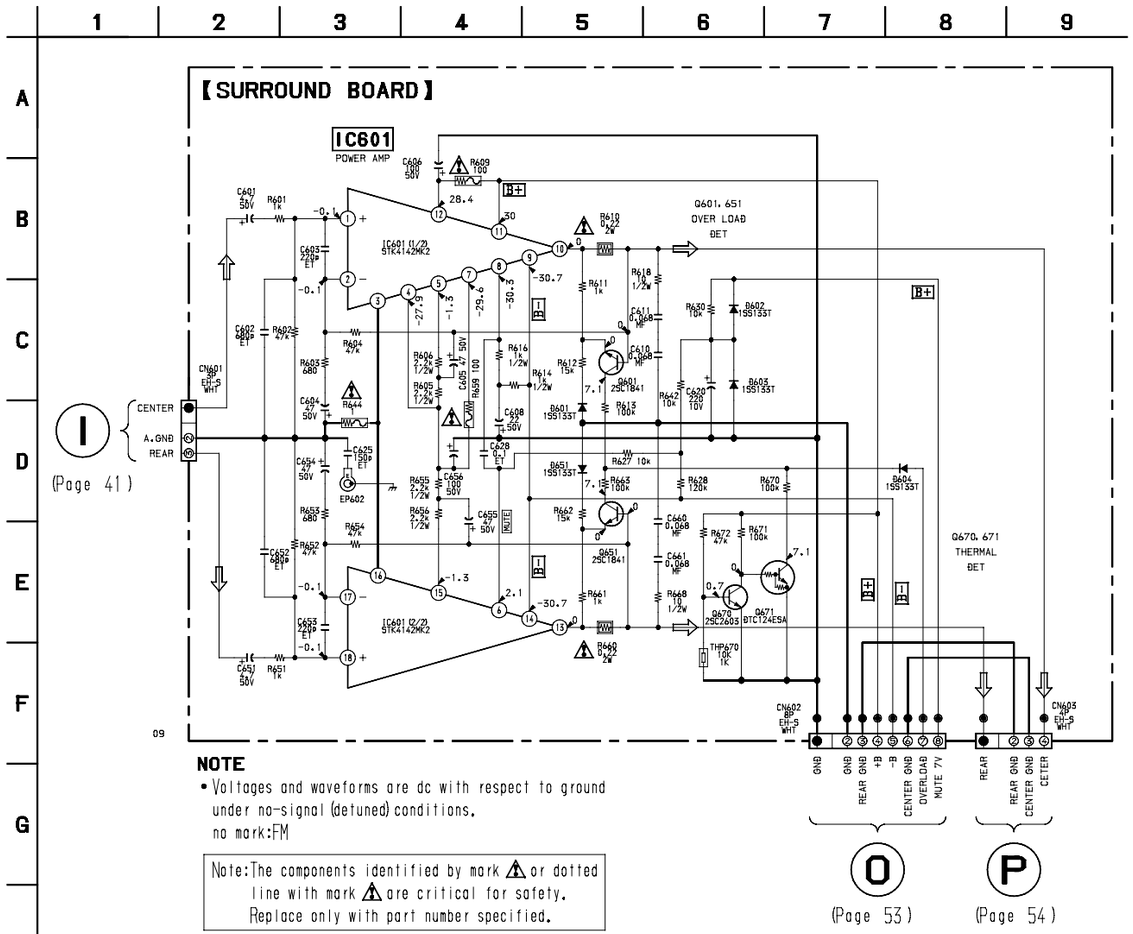
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

6-27. PRINTED WIRING BOARD – SURROUND SECTION –

• See page 16 for Circuit Boards Location.



6-28. SCHEMATIC DIAGRAM – SURROUND SECTION –



NOTE

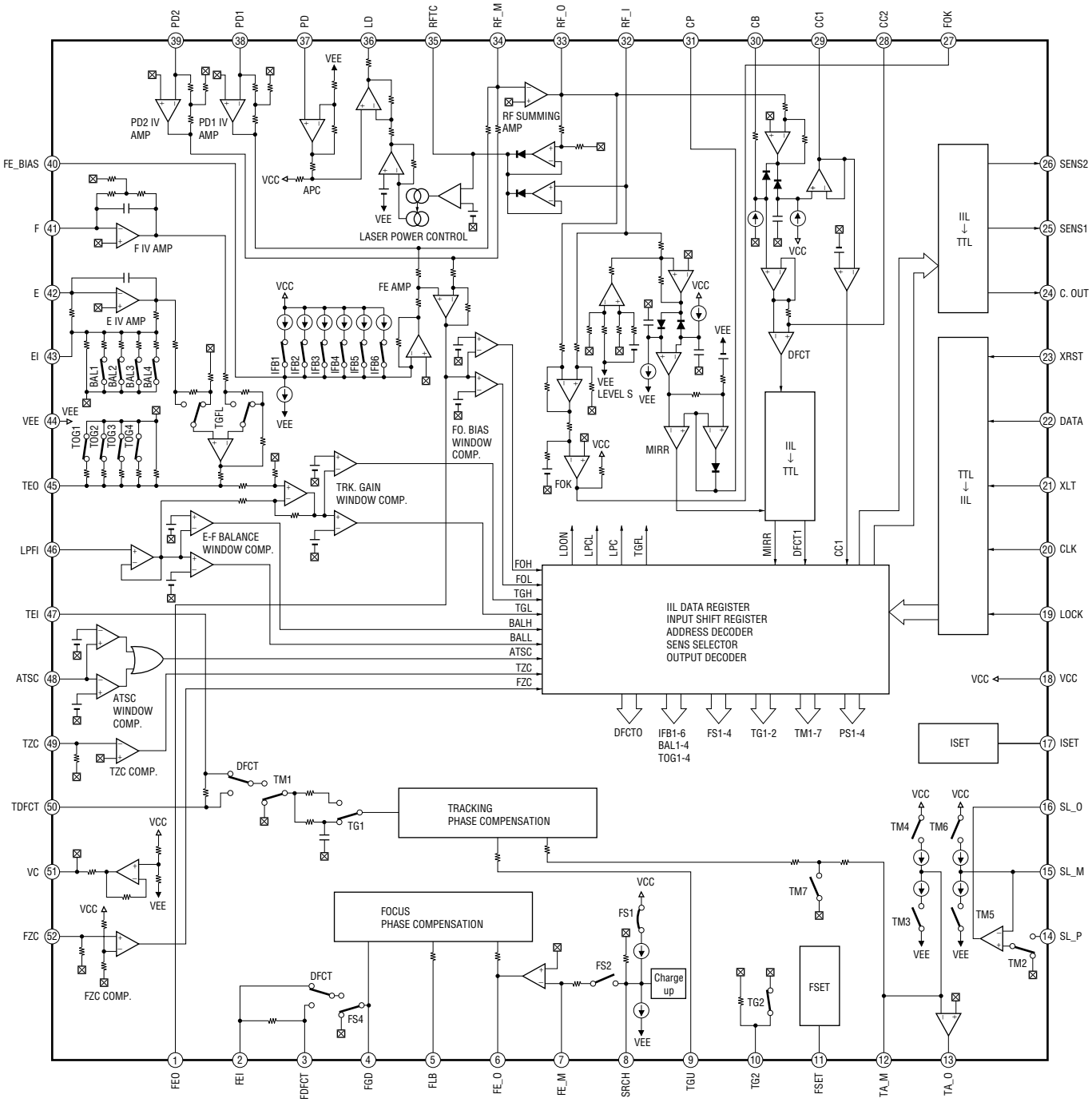
• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark:FM

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

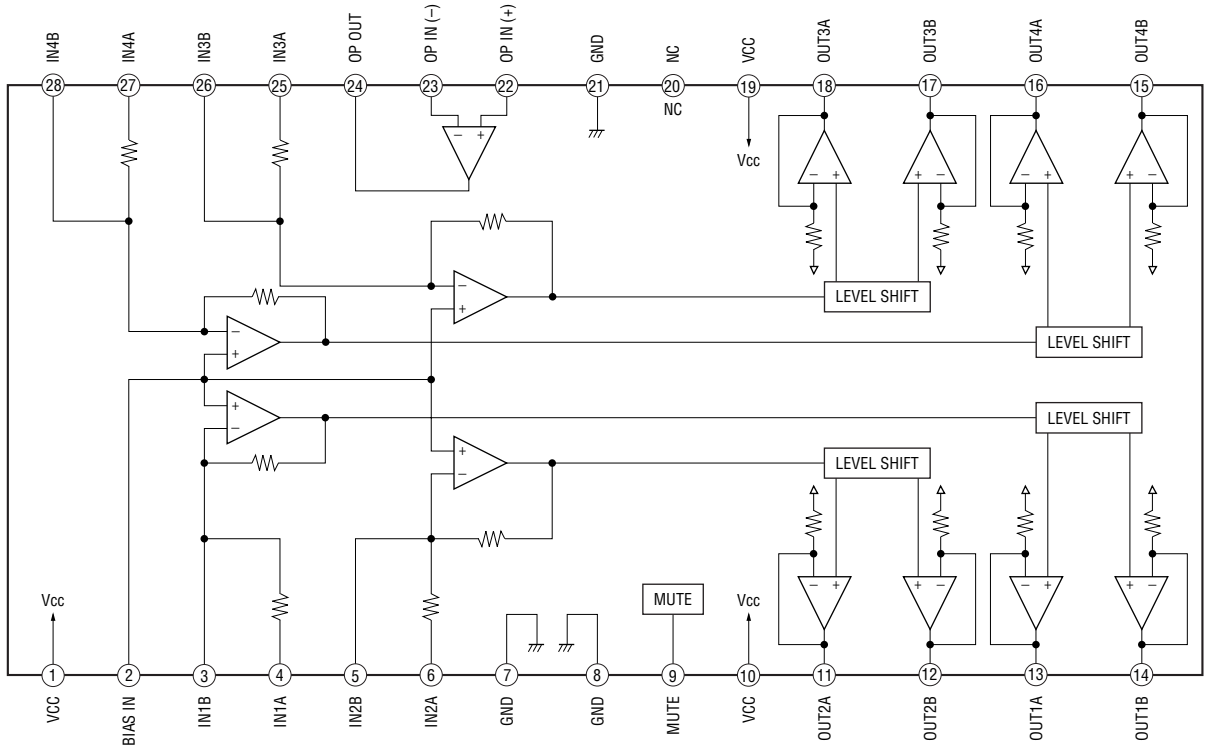
6-29. IC BLOCK DIAGRAMS

• CD section

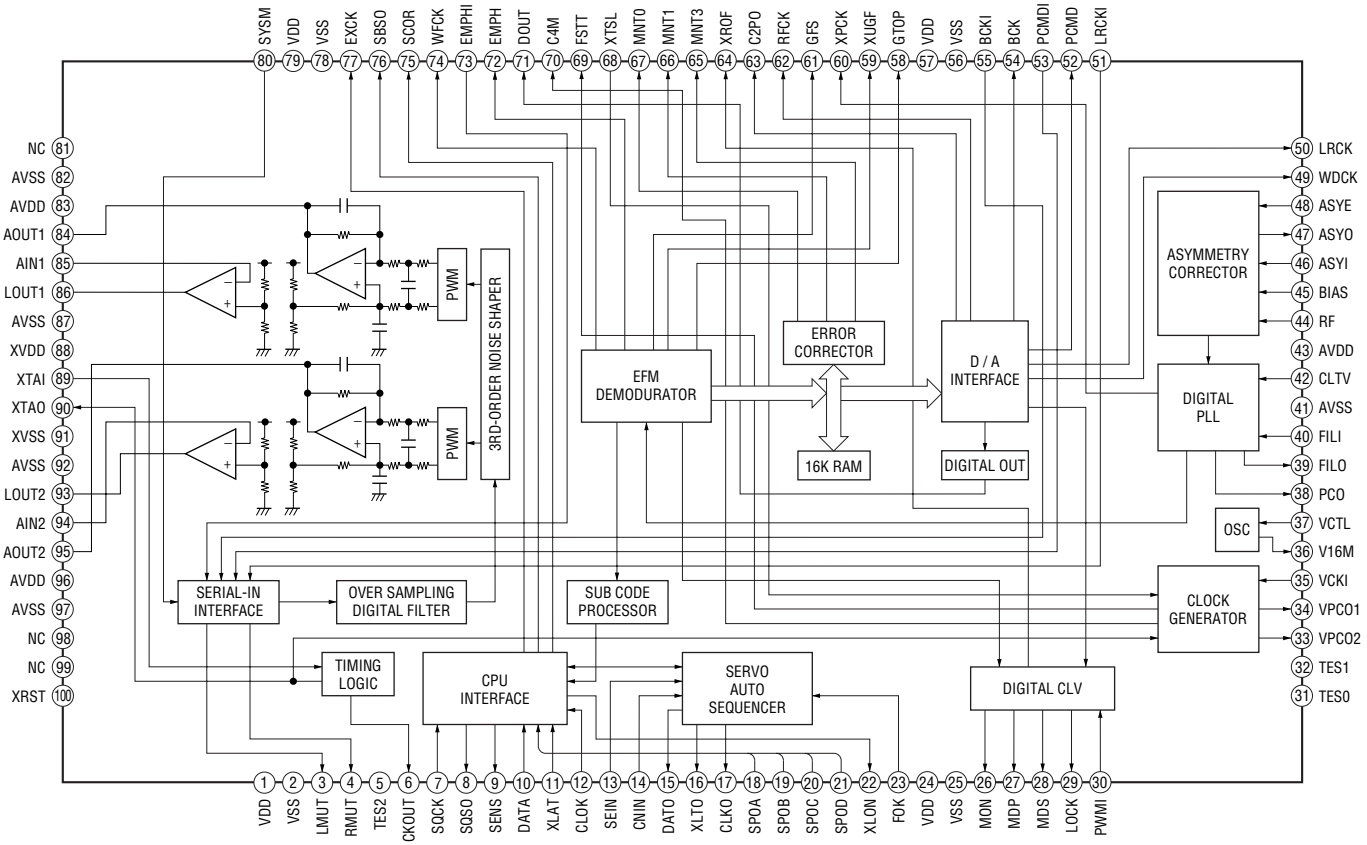
IC101 CXA1992AR



IC102 BA5941FP

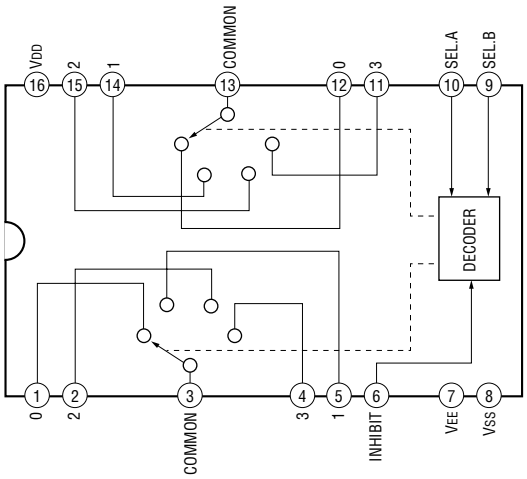


IC103 CXD2519Q

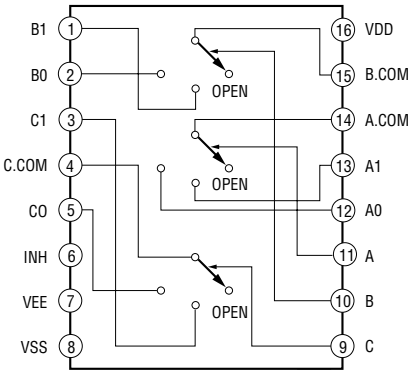


• **Main section**

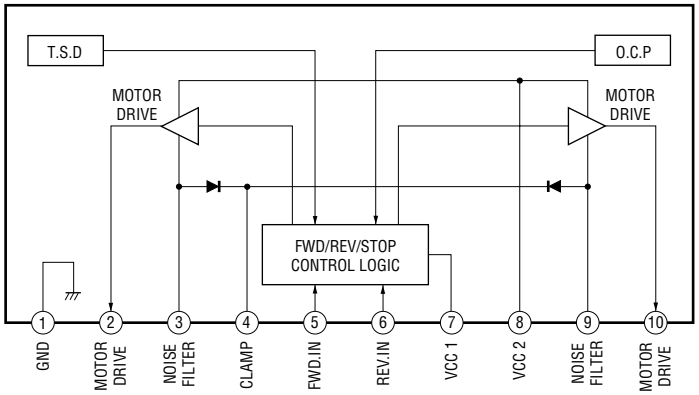
IC102 MC14052BCP



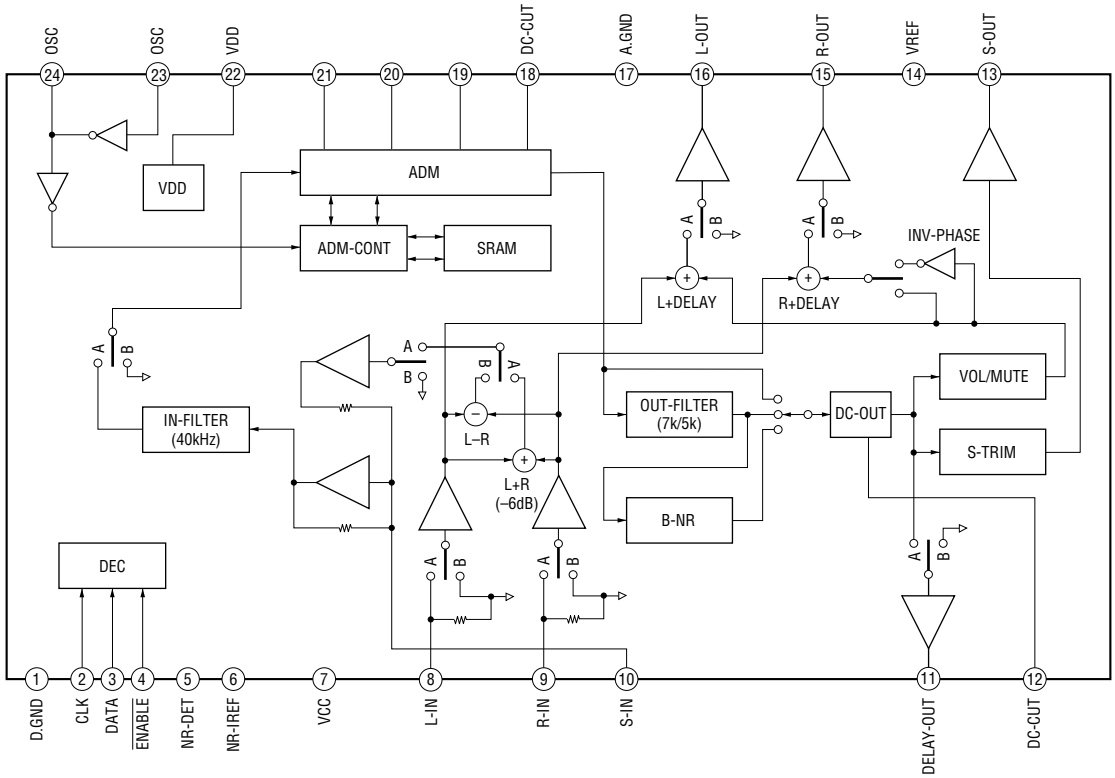
IC103, 1403, 1702 MC14053BCP



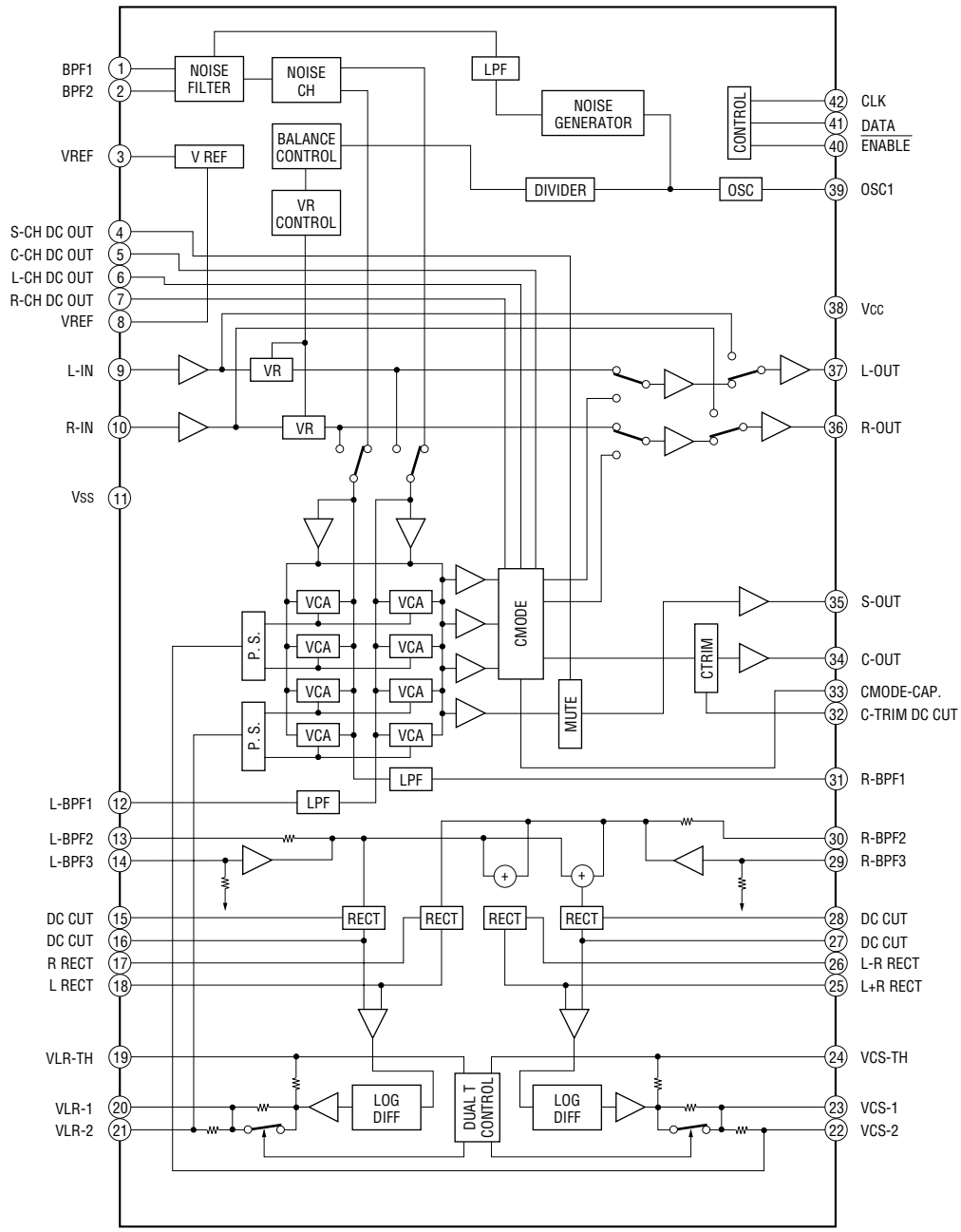
IC402 LB1641



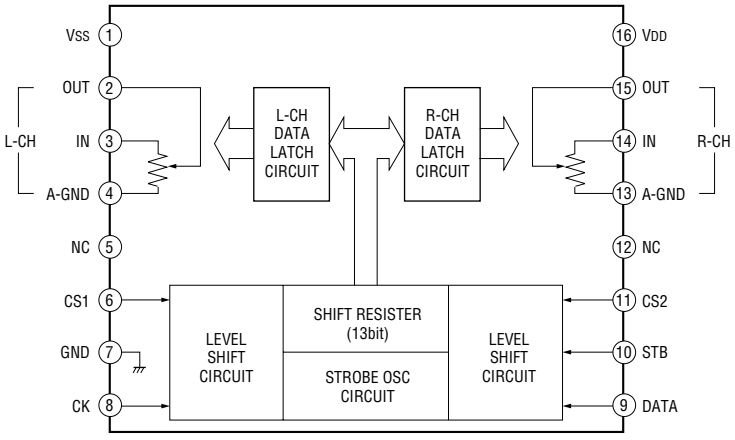
IC602 LV1016



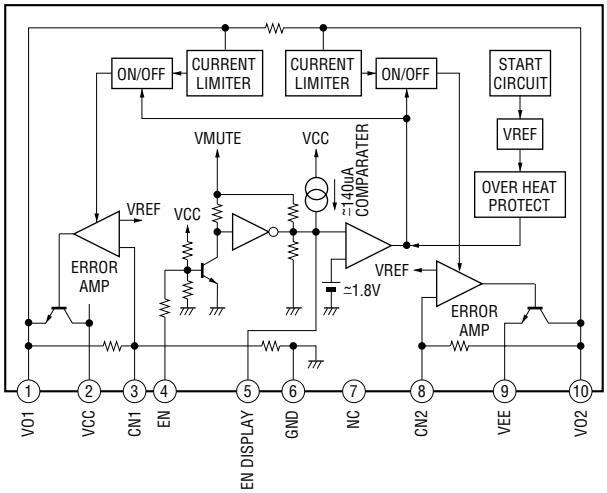
IC601 LA2786



IC604 TC9210P

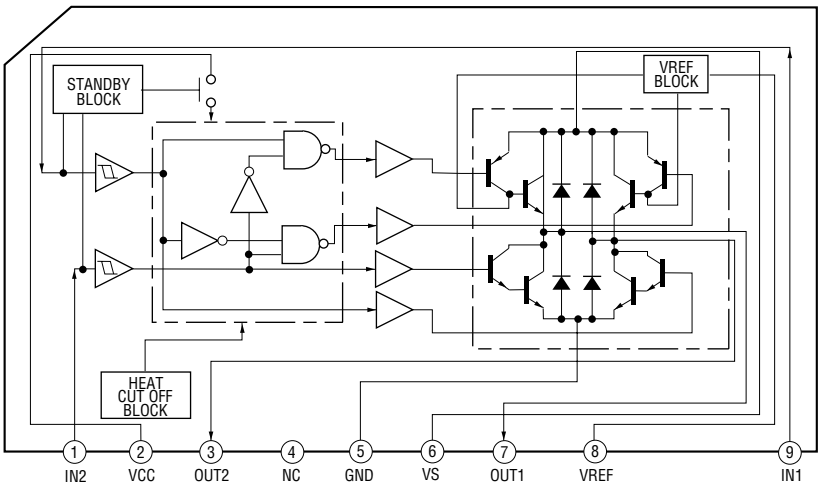


IC901 LA5617



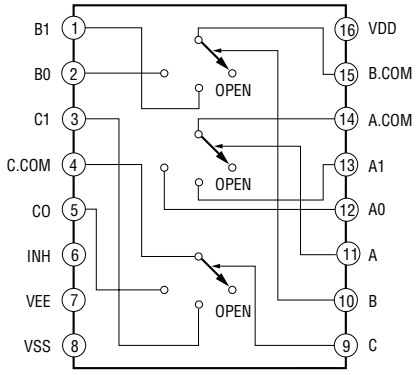
• **CD motor sectoin**

IC201 TA8409S



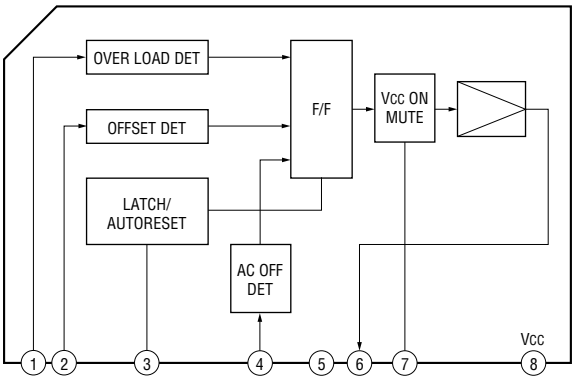
• **KEY CON sectoin**

IC1403 BU4053BC

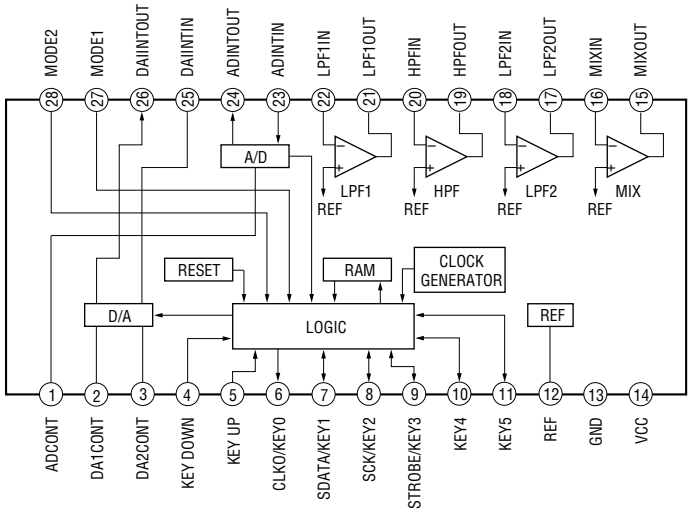


• **Power sectoin**

IC301 uPC1237HA

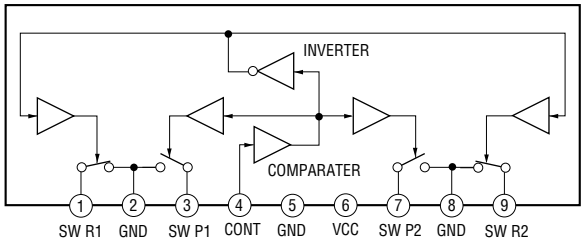


IC1401 M65847FP



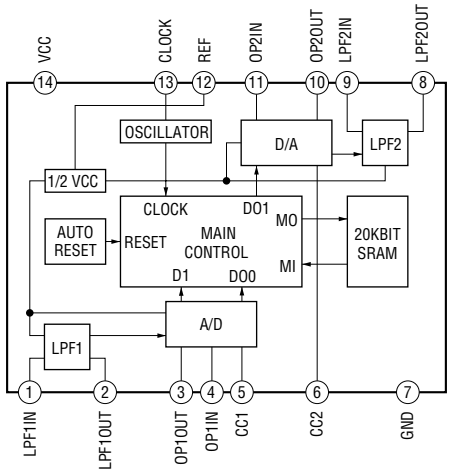
• **Deck sectoin**

IC602 uPC1330HA



• **HP/MIC sectoin**

IC761 M65850P



6-30. IC PIN FUNCTIONS

• IC101 FOCUS/TRACKING/SLED SERVO RF AMP (CXA1992AR)

Pin No.	Pin Name	I/O	Function
1	FEO	O	Focus error amplifier output Connected internally to the window comparator input for bias adjustment
2	FEI	I	Focus error input
3	FDFCT	I	Capacitor connection pin for defect time constant
4	FGD	I	Ground this pin through a capacitor for cutting the focus servo high-frequency gain
5	FLB	I	External time constant setting pin for boosting the focus servo low-frequency
6	FE O	O	Focus drive output
7	FE M	I	Focus amplifier inverted input
8	SRCH	I	External time constant setting pin for generating focus search waveform
9	TGU	I	External time constant setting pin for switching tracking high-frequency gain
10	TG2	I	External time constant setting pin for switching tracking high-frequency gain
11	FSET	I	Peak frequency setting pin for focus and tracking phase compensation amplifier
12	TA M	I	Tracking amplifier inverted input
13	TA O	O	Tracking drive output
14	SL P	I	Sled amplifier non-inverted input
15	SL M	I	Sled amplifier inverted input
16	SL O	O	Sled drive output
17	ISET	I	Connect an external capacitance to set the current which determines the Focus search, Track jump, and Sled kick heights
18	V_{CC}	I	Positive power supply
19	LOCK	I	The sled overrun prevention circuit operates when this pin is Low (No pull-up resistance)
20	CLK	I	Serial data transfer clock input from CPU (No pull-up resistance)
21	XLT	I	Lach input from CPU (No pull-up resistance)
22	DATA	I	Serial data input from CPU (No pull-up resistance)
23	XRST	I	Reset input; resets at Low (No pull-up resistance)
24	C.OUT	O	Track number count signal output
25	SENS1	O	Outputs FZC, DFCT1, TZC, BALH, TGH, FOH, ATSC, and others according to the command from CPU
26	SENS2	O	Outputs DFCT2, MIRR, BALL, TGL, FOL,and others according to the command from CPU
27	FOK	O	Focus OK comparator output
28	CC2	I	Input for the defect bottom hold output with capacitance coupled
29	CC1	O	Defect bottom hold output Connected internally to the interruption comparator input
30	CB	I	Connection pin for defect bottom hold capacitor
31	CP	I	Connection pin for MIRR hold capacitor MIRR comparator non-inverted input
32	RF I	I	Input for the RF summing amplifier output with capacitance coupled
33	RF O	O	RF summing amplifier output Eye-pattern check point

• Abbreviation
FZC : Focus zero-cross
DFCT : Defect
TZC : Tracking zero-cross
BALH : E-F Balance (High)
TGH : Tracking Gain (High)
FOH : Focus Bias (High)
ATSC : Auti Shock
MIRR : Mirror
BALL : E-F Balance (Low)
TGL : Tracking Gain (LOW)
FOL : Foucas Bias (LOW)

Pin No.	Pin Name	I/O	Function
34	RF M	I	RF summing amplifier inverted input The RF amplifier gain is determined by the resistance connected between this pin and RFO pin
35	RFTC	I	External time constant setting pin during RF level control
36	LD	O	APC amplifier output
37	PD	I	APC amplifier input
38	PD1	I	RF I-V amplifier inverted input
39	PD2	I	Connect these pins to the photo diode A+C and B+D pins
40	FE BIAS	I	Bias adjustment of focus error amplifier Leave this pin open for automatic adjustment
41	F	I	F I-V and E I-V amplifier inverted input
42	E	I	Connect these pins to photo diodes F and E
43	EI	–	I-V amplifier E gain adjustment (When not using automatic balance adjustment)
44	VEE	–	Negative power supply
45	TEO	O	Tracking error amplifier output E-F signal is output
46	LPFI	I	Comparator input for balance adjustment (Input from TEO through LPF)
47	TEI	I	Tracking error input
48	ATSC	I	Window comparator input for ATSC detection
49	TZC	I	Trackig zero-cross comparator input
50	TDFCT	I	Capacitor connection pin for defect time constant
51	VC	O	(V_{CC} + V_{EE})/2 direct voltage output
52	FZC	I	Focus zero-cross comparator input

• Abbreviation
APC : Auto Power Control

• **IC103 DIGITAL SIGNAL PROCESSOR (CXD2519Q)**

Pin No.	Pin Name	I/O	Function
1	VDD	–	+5V power supply
2	VSS	–	Ground
3	LMUT	O	Lch "L" detection flog (Not used)
4	RMUT	O	Rch "L" detection flog (Not used)
5	ACDT	O	Test output (Not used)
6	CKOUT	O	Master clock divider output (Not used)
7	SQCK	I	Clock input for SQSO read out
8	SQSO	O	Serial output for Sub-Q 80bit
9	SENS	O	SENS signal output to CPU
10	DATA	I	Serial data input, supplied from CPU
11	XLAT	I	Latch input, supplied from CPU
12	CLOK	I	Serial data transfer clock input, supplied from CPU
13	SEIN	I	SENS input from IC101
14	CNIN	I	Numbers of track jump counted signal input
15	DATO	O	Serial data output to IC101
16	XLTO	O	Serial data latch output to IC101
17	CLKO	O	Serial data transfer clock output to IC101
18	SPOA	I	Micro computer demodulation interface (Input A)
19	SPOB	I	Micro computer demodulation interface (Input B)
20	SPOC	I	Micro computer demodulation interface (Input C)
21	SPOD	I	Micro computer demodulation interface (Input D)
22	XLON	O	Micro computer demodulation interface (Output)
23	FOK	I	Focus OK input
24	VDD	–	+5V power supply
25	VSS	–	Ground
26	MON	O	Output to control ON/OFF of spindle motor (Not used)
27	MDP	O	Output to control spindle motor servo
28	MDS	O	Output to control spindle motor servo (Not used)
29	LOCK	O	GFS is sampled by 460Hz
30	PWMI	I	Input to control the outside spindle motor
31	TES0	I	Test pin (Connected to ground)
32	TES1	I	Test pin (Connected to ground)
33	VPCO2	O	Charge-pump output (Not used)
34	VPCO1	O	Charge-pump output (Not used)
35	VCKI	I	VCO2 oscillator input (Not used)
36	V16M	O	VCO2 oscillator output (Not used)
37	VCTL	I	VCO2 control voltage input
38	PCO	O	Charge-pump output to master PLL
39	FILO	O	Filter output to master PLL
40	FILI	I	Filter input for master PLL

• Abbreviation
GFS : Guarded Frame Sync
PLL : Phase Locked Loop

Pin No.	Pin Name	I/O	Function
41	AVSS	–	Analog ground
42	CLTV	I	Control voltage input for VCO
43	AVDD	–	Analog power supply
44	RF	I	EFM signal input
45	BIAS	I	Asymmetry circuit constant current input
46	ASYI	I	Asymmetry comparate voltage input
47	ASYO	O	EFM full swing output (“L” =VSS, “H” =VDD)
48	ASYE	I	Asymmetry circuit ON/OFF (“L”=OFF, “H”=ON)
49	WDCK	O	D/A interface Word clock f=2fs (Not used)
50	LRCK	O	D/A interface LR clock output f=Fs
51	LRCKI	I	D/A interface LR clock input f=Fs
52	PCMD	O	D/A interface Serial data output
53	PCMDI	I	D/A interface Serial data input
54	BCK	O	D/A interface Bit clock output
55	BCKI	I	D/A interface Bit clock input
56	VSS	–	Ground
57	VDD	–	+5V power supply
58	GTOP	O	Not used
59	XUGF	O	Not used
60	XPLCK	O	EFM decoder PLL clock output
61	GFS	O	“H” Playback EFM sync and interpolation protection timming much
62	RFCK	O	Read Frame Clock signal output
63	C2PO	O	Not used
64	XRAOF	O	Internal RAM overflow detection signal output (Not used)
65	MNT3	O	Not used
66	MNT1	O	Not used
67	MNT0	O	Not used
68	XTSL	I	Not used
69	FSTT	O	2/3 divider output (Not used)
70	C4M	O	4.2336MHz output(Not used)
71	DOUT	O	Digital audio signal output
72	EMPH	O	Playback disc output in emphasis mode
73	EMPHI	I	“H” =Input when de-emphasis ON
74	WFCK	O	Write Frame Clock signal output
75	SCOR	O	Sub-code sync output
76	SBSO	O	Sub-P through Sub-W serial output
77	EXCK	I	Clock input for SBSO read-out
78	VSS	–	Ground
79	VDD	–	+5V power supply
80	SYSM	I	System mute input

• Abbreviation
EFM : Eight to Fourteen Modulation

Pin No.	Pin Name	I/O	Function
81	—	–	Not used
82	AVSS	–	Analog ground
83	AVDD	–	Analog power supply
84	AOUT1	O	Lch analog output
85	AIN1	I	Lch opamp input
86	LOUT1	O	Lch line output
87	AVSS	–	Analog ground
88	XVDD	–	Master clock power supply
89	XTAI	I	X’tal oscillator circuit input
90	XTAO	O	X’tal oscillator circuit output
91	XVSS	–	Master clock ground
92	AVSS	–	Analog ground
93	LOUT2	O	Rch line output
94	AIN2	I	Rch opamp input
95	AOUT2	O	Rch analog output
96	AVDD	–	Analog power supply
97	AVSS	–	Analog ground
98	—	–	Not used
99	—	–	Not used
100	XRST	I	Sysyem reset input

• IC601 DISPLAY CONTROL (TMP87CH75F-6559)

Pin No.	Pin Name	I/O	Function
1	SEG35	O	FL segment signal output
2	VLOAD	–	Power supply (–25V) for FL segment signal output
3 to 10	LED1 to LED8	O	LED driver output
11	VSS	–	Ground
12	X-OUT	O	X'tall (8MHz)
13	X-IN	I	
14	RESET	I	Reset signal input from main controller
15	LED 9	O	Connected to ground
16	LED10	O	
17	TEST	I	
18 to 23	LED11 to LED16	O	LED driver output
24	VOL-A	I	Rotary encoder (S701) pulse input
25	LED17	O	LED driver output
26	JOG-A	I	Rotaly encoder (S711) pulse input
27	CLOCK	I	Serial clock input from main controller
28	DATA	I	Serial data input from main controller
29	LED SELECT	O	LED select signal output
30	VDD	–	Power supply (+5V)
31	VSS	–	Ground
32	MODEL	I	Version select signal input
33 to 37	KEY1 to KEY5	I	Key input
38	DOOR SW	I	DOOR SW (S691) ON/OFF signal input
39	SIRCS	I	Remote commander signal input
40	VOL-B	I	Rotary encoder (S701) pulse input
41	JOG-B	I	Rotary encoder (S711) pulse input
42	SPEANA-1	I	Spectrum analyzer input
43	SPEANA-2	I	Spectrum analyzer input
44	SPEANA-3	I	Spectrum analyzer input
45	SPEANA-4	I	Spectrum analyzer input
46	L + R	I	Spectrum analyzer (high frequency) input
47	LED18	O	LED driver output
48	VASS	–	Ground
49	VAREF	I	Analog reference voltage input
50	VDD	–	Power supply (+5V)
51 to 56	GR1 to GR16	O	FL gride signal output
67 to 100	SEG1 to SEG34	O	FL segment signal output

• Abbreviation
FL : Fluorescent indicator tube

• **IC701 MASTER CONTROL (uPD780018YGF-028-3BA)**

Pin No.	Pin Name	I/O	Function
1	TA-MUTE	O	Line mute signal output
2	DBFB-H/L	O	DBFB H/L select signal output
3	427-LT	O	Latch signal output for IC201 (62427)
4	KCON-LT	O	Latch signal output for key control
5	KCON-ON	O	Key control ON/OFF signal output
6	F-RELAY	O	Front speaker relay control output (Not used)
7	R-RELAY	O	Rear speaker relay control output
8	PL-RELAY	O	Not used
9	TEST	I	Connected to ground
10	X2	O	X'tal (5MHz)
11	X1	I	
12	VDD	–	Power supply (+5V)
13	XT2	O	X'tal (32.768 KHz)
14	XT1	I	
15	RESET	I	Reset signal input
16	INT/IN	I	Connected to ground
17	INT/IN/OUT	I	
18	SCOR	O	Subcode data request signal output
19	SOFT-TEST	O	Software test port
20	AC-CUT	I	Back up signal input
21	RDS-INT	I	RDS data interrupt input (Connected to ground)
22	RDS-DATA	I	RDS data interrupt input (Not used)
23	VDD	–	Power supply (+5V)
24	AVDD	I	Analog reference voltage input.
25	ADJ	I	CD adjust point port Normal "H"
26	A-SHUT	I	A Deck reel pulse detector
27	B-SHUT	I	B Deck reel pulse detector
28	B-HALF	I	Half detector signal input
29	CLK-CHECK	I	Connected to ground
30	SPEC-IN	I	Version select signal input
31	ADJ 2	I	Connected to ground
32	DEMO-CHANGE	I	DEMO H/L select signal input (Connected to ground)
33	AVSS	–	Ground
34	SQ-DATA-IN	I	Subcode Q data clock input
35	—	I	Not used
36	SQ-CLK	I	Sub code Q data clock input
37	SW-ON/OFF	O	Not used
38, 39	FUNC 1, 2	I	Connected to ground
40	VSS	–	Ground
41	VOL-LAT	O	Latch signal to erectrial volume (IC604)
42	PL-LAT	O	Latch signal to pro-logic (IC601, 602)
43	COM-DIN	I	Connected to ground
44	COM-DOUT	O	Common serial data output
45	COM-CLK	O	Common serial clock output
46	CD-POWER	O	CD power on signal output
47	CD-DATA	O	CD data output
48	CD-CLK	O	CD clock output
49	MSM-CMD	O	Not used
50	MSM-BUSY	I	Connected to ground

Pin No.	Pin Name	I/O	Function
51	MSM-LT	O	Not used
52	MSM-NAR	I	
53	MSM-CH	O	
54	INPUT-CHANGE	O	Input sensitivity switching output
55	IIC-DATA	O	Data output for IC601
56	IIC-CLK	O	Clock output for IC601
57	XRST	O	CD reset signal output
58	XLT	O	CD latch signal output
59	FOUCUS-SW	O	Not used
60	TBL-L	O	Table motor control output
61	TBL-R	O	
62	TRAY-LED	O	CD tray LED ON/OFF output
63	LOAD-OUT	O	Not used
64	LOAD-IN	O	
65	ST-CLK	O	Tuner clock output
66	ST-DIN	I	Tuner data input
67	ST-DOUT	O	Tuner data output
68	ST-CE	O	Tuner chip enable output
69	TUNED	I	Tuned detection for tuner
70	STEREO	I	Stereo detection for tuner
71	VSS	–	Ground
72	ST-MUTE	O	Tuner mute signal output
73	SENS2	I	BD Condition signal input
74	SENS	I	
75	DISC-SENS	I	Not used
76	T-SENS	I	CD table detection signal input
77	UP-SW	I	Up SW (S201) signal input
78	ENC 3	I	Not used
79	ENC 2	I	
80	ENC 1	I	
81	OUT-OPEN	I	Not used
82	CAP-M-H/N	O	Capstan motor H/N speed select signal output
83	B-TRG	O	Trigger motor control output
84	A-TRG	O	Trigger motor control output
85	TRG-LOW	O	Trigger motor control output
86	CAP-M-ON/OFF	O	Capstan motor ON/OFF signal output
87	PB-A/B	O	PB Deck A/Deck B select output
88	EQ-H/N	O	Equalizer H/N select output
89	BIAS	O	Bias ON/OFF signal output
90	REC-MUTE	O	REC mute ON/OFF selection output
91	NR-ON/OFF	O	NR ON/OFF signal output
92	R/P-PASS	O	REC/PB/PASS selection output
93	TC-MUTE	O	TC mute ON/OFF selection output
94	A-PLAY-SW	I	Deck A play detect
95	B-PLAY-SW	I	Deck B play detect
96	TC-RELAY	O	REC/PB head selection output for IC602
97	A-HALF	I	Deck A cassette detect
98	POWER	O	POWER ON/OFF signal output
99	SW-F-CHG	O	Super woofer mode signal output
100	STK-MUTE	O	Power amp ON/OFF signal output

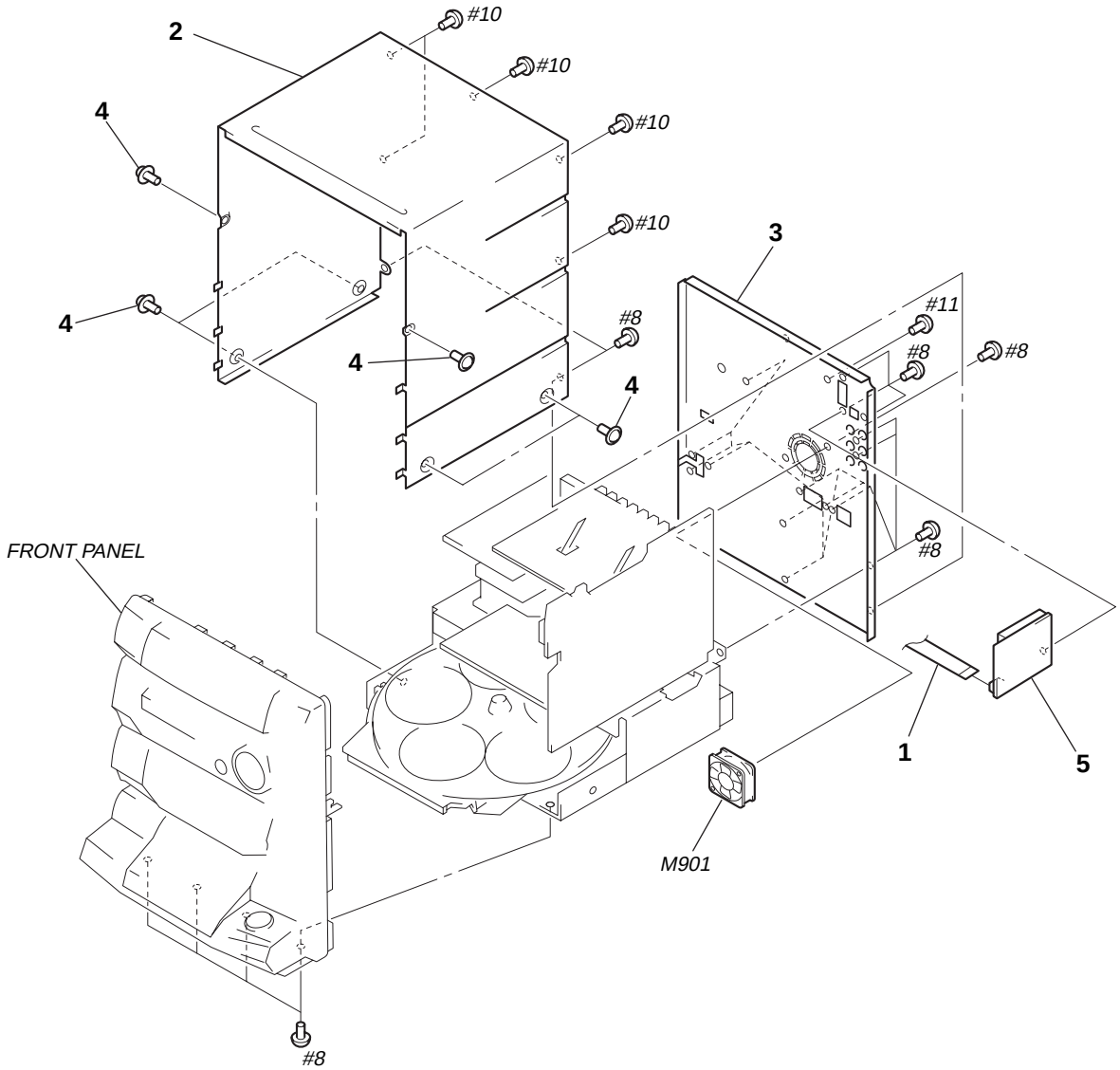
SECTION 7
EXPLODED VIEWS

NOTE:
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

- Abbreviation
  EA : Saudi Arabia model
  SP : Singapore model
  MY : Malaysia model
  TH : Thai model
  IA : Indonesian model

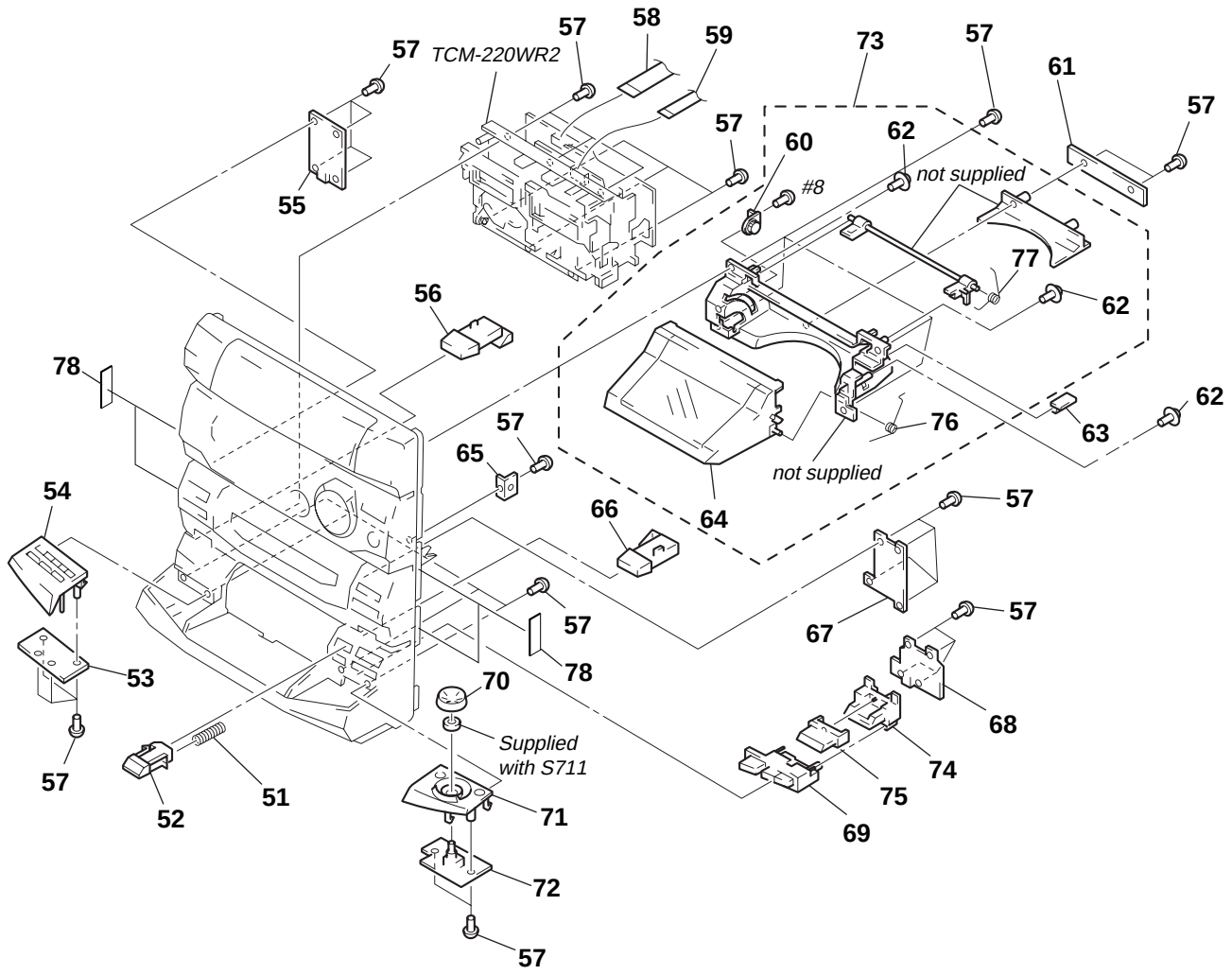
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

7-1. CASE AND BACK PANEL SECTION



Ref. No.	Part No.	Description	Remark
1	1-769-974-11	WIRE (FLAT TYPE) (13 CORE)	
* 2	4-987-052-91	CASE	
* 3	4-996-861-11	PANEL, BACK (XB88AVK:SP,MY)	
* 3	4-996-861-61	PANEL, BACK (XB88AVK:E,IA)	
* 3	4-996-861-71	PANEL, BACK (XB88AVK:EA)	
* 3	4-996-861-91	PANEL, BACK (XB88K)	
4	3-363-099-01	SCREW (CASE 3 TP2)	
5	1-233-545-11	ENCAPSULATED COMPONENT	
M901	1-698-792-11	FAN, DC	

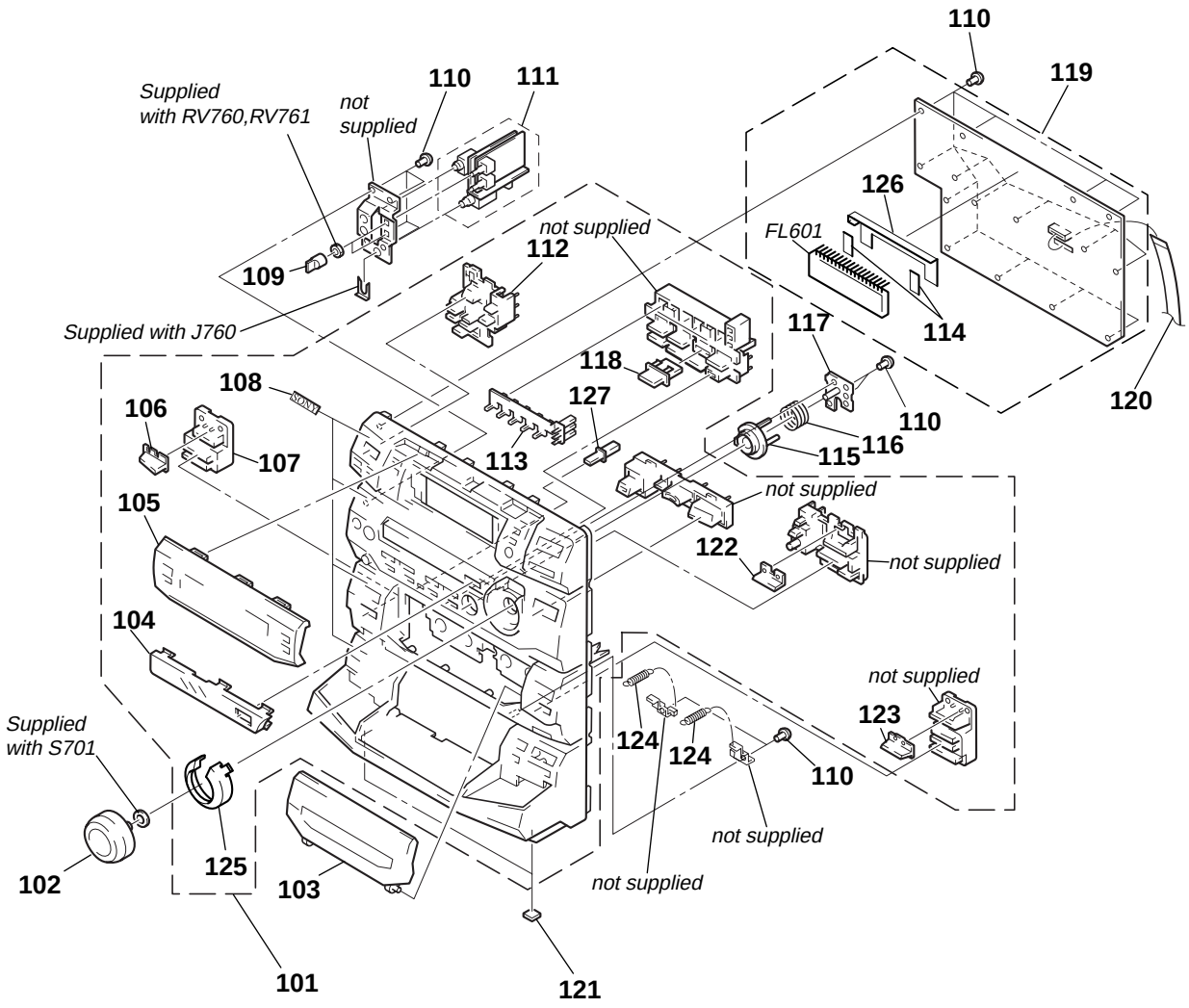
7-2. FRONT PANEL SECTION 1



Ref. No.	Part No.	Description	Remark
51	4-987-995-01	SPRING (CD EJECT), COMPRESSION	
52	4-987-001-11	BUTTON (EJECT CD)	
* 53	1-664-019-11	CD-A SW BOARD	
54	X-4949-282-1	PANEL (A) SUB ASSY	
* 55	1-664-012-11	TC-A SW BOARD	
56	4-986-999-11	BUTTON (EJECT A)	
57	4-951-620-01	SCREW (2.6X8), +BVTP	
58	1-773-163-11	WIRE (FLAT TYPE) (21 CORE)	
59	1-769-949-11	WIRE (FLAT TYPE) (11 CORE)	
60	3-354-963-01	DAMPER	
* 61	1-664-017-11	CD-LED BOARD	
62	4-957-577-01	SCREW PTP WH (2.6X8) (DIA. 10)	
* 63	1-664-016-11	DOOR SW BOARD	
64	X-4949-685-1	LID ASSY, DISC	
* 65	4-987-933-01	BRACKET (TA)	

Ref. No.	Part No.	Description	Remark
66	4-987-000-11	BUTTON (EJECT B)	
* 67	1-664-013-11	TC-B SW BOARD	
* 68	1-664-020-11	CD-B1 SW BOARD	
69	X-4949-279-1	BUTTON (CD STOP) ASSY	
70	4-987-037-11	KNOB (JOG)	
71	X-4949-274-1	PANEL (B) SUB ASSY	
* 72	1-664-021-11	CD-B2 SW BOARD	
73	A-4411-043-A	LID ASSY, CD (XB88K)	
73	A-4384-916-A	LID ASSY, CD (XB88AVK)	
74	4-987-002-11	BUTTON (CD.PLAY)	
75	4-987-014-01	INDICATOR (CD)	
76	4-987-997-01	SPRING (CD.LID), TORSION	
77	4-987-998-01	SPRING (LOCK SHAFT), TORSION	
78	3-568-749-00	CUSHION, ECM	

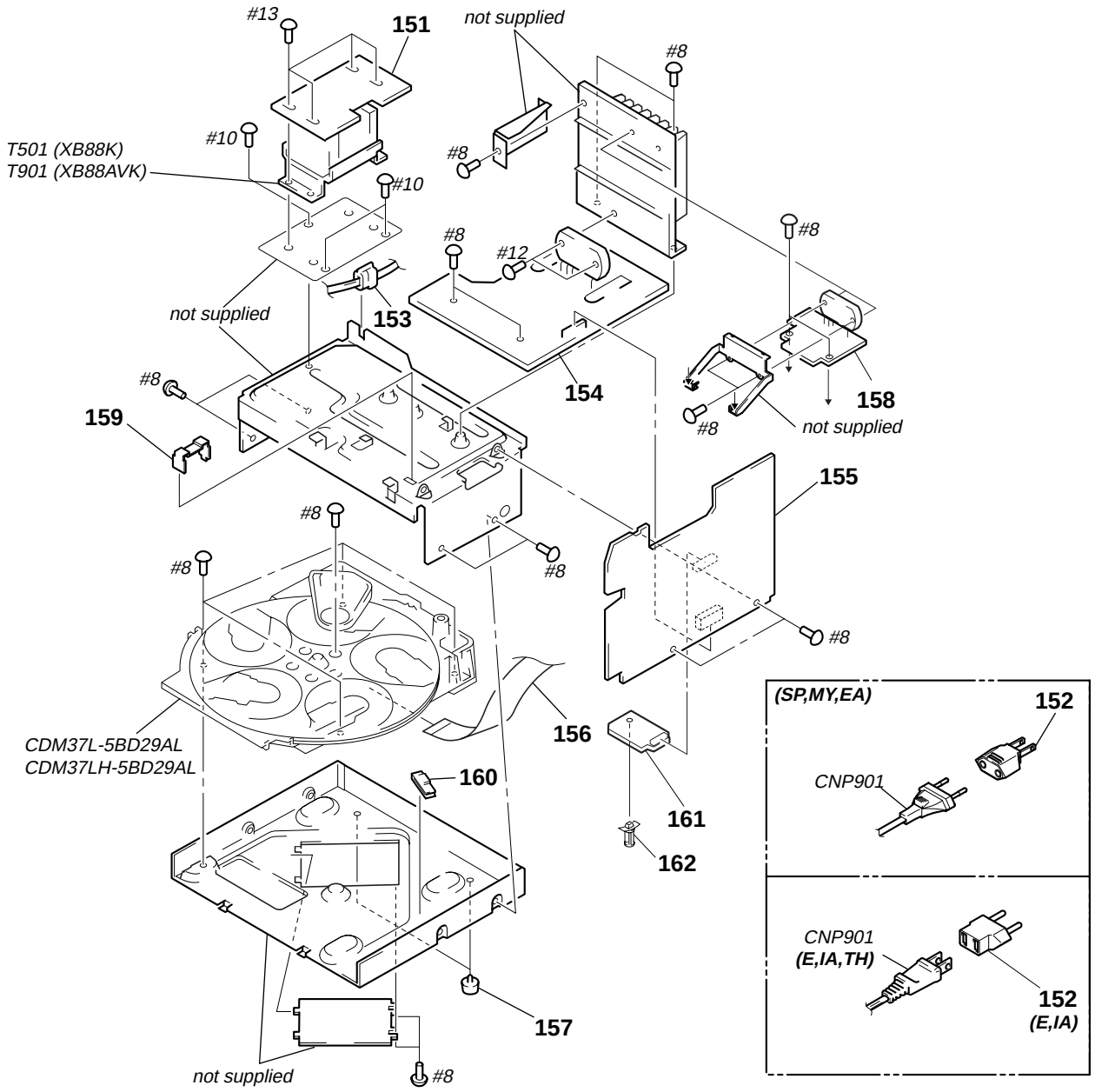
7-3. FRONT PANEL SECTION 2



Ref. No.	Part No.	Description	Remark
101	X-4949-381-1	PANEL ASSY (XB88AVK)	
101	X-4950-183-1	PANEL ASSY (XB88K)	
102	4-987-036-11	KNOB (VOL)	
103	X-4949-271-1	LID ASSY, CASSETTE	
104	4-987-032-01	DISPLAY (TA)	
105	4-987-028-11	DISPLAY (ST)	
106	4-987-021-01	INDICATOR (TC A)	
107	4-986-997-41	BUTTON (DECK.A)	
108	4-963-404-21	EMBLEM (5-A), SONY	
109	4-973-644-71	KNOB (MIC)	
110	4-951-620-01	SCREW (2.6X8), +BVTP	
* 111	A-4403-916-A	HP/MIC BOARD, COMPLETE	
112	4-986-986-21	BUTTON (POWER)	
113	4-987-012-01	INDICATOR (TA)	
* 114	4-949-935-81	CUSHION (FL)	

Ref. No.	Part No.	Description	Remark
115	4-986-990-11	BUTTON (CURSOR)	
116	4-978-683-01	SPRING, COMPRESSION	
* 117	4-987-041-01	COVER, CURSOR	
118	4-988-219-01	BUTTON (DOLBY)	
* 119	A-4407-212-A	PANEL BOARD, COMPLETE	
120	1-773-051-11	WIRE (FLAT TYPE) (17 CORE)	
121	4-948-236-21	CUSHION (107)	
122	4-987-013-01	INDICATOR (TUNER)	
123	4-987-022-01	INDICATOR (TC B)	
124	4-987-996-01	SPRING (TC LID), TENSION	
125	4-987-930-01	PLATE (VOL), ORNAMENTAL	
* 126	4-986-870-11	HOLDER, FL TUBE	
127	4-987-017-01	INDICATOR (KEY.CON)	
FL601	1-517-617-11	INDICATOR TUBE, FLUORESCENT	

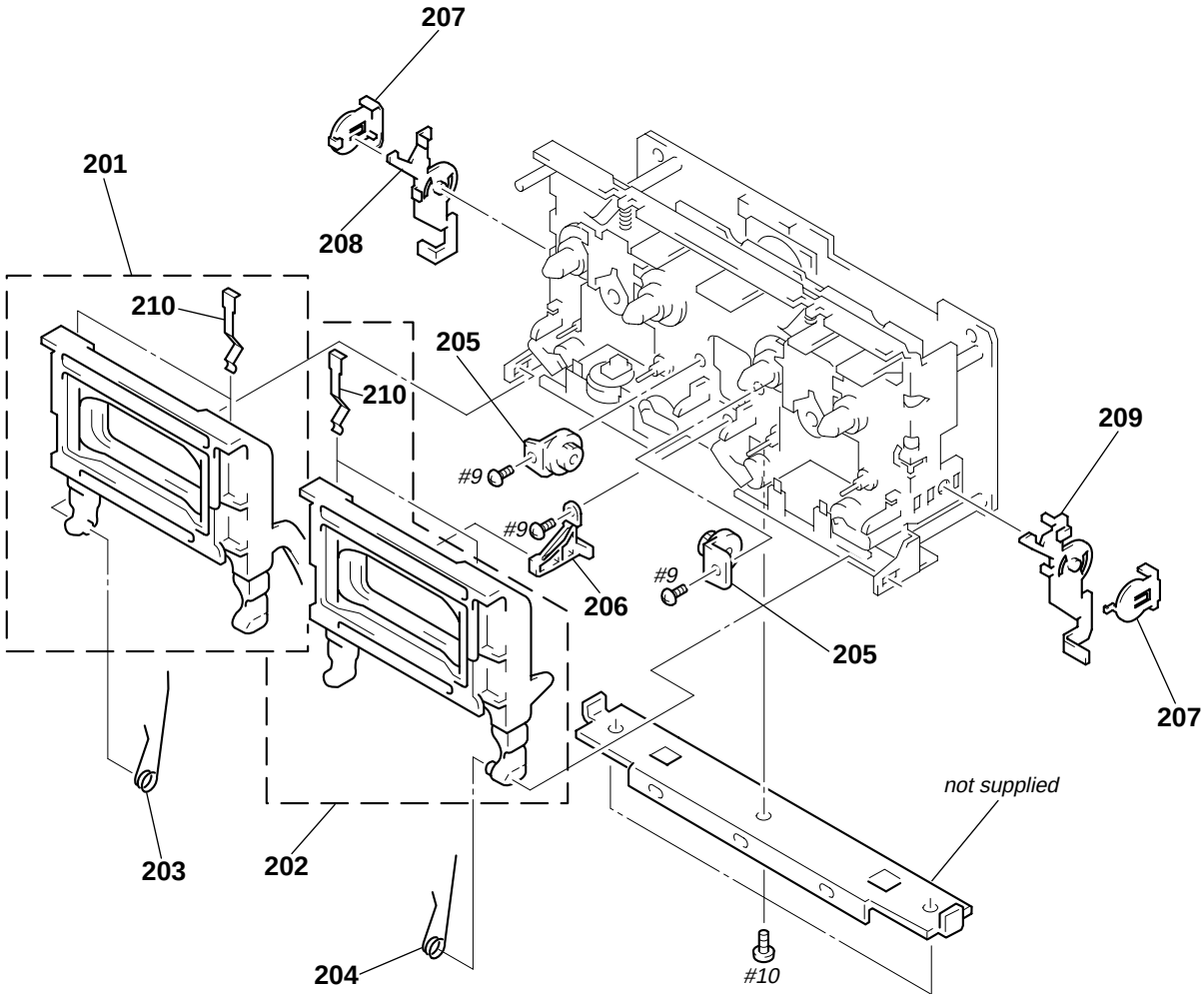
7-4. CHASSIS SECTION



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

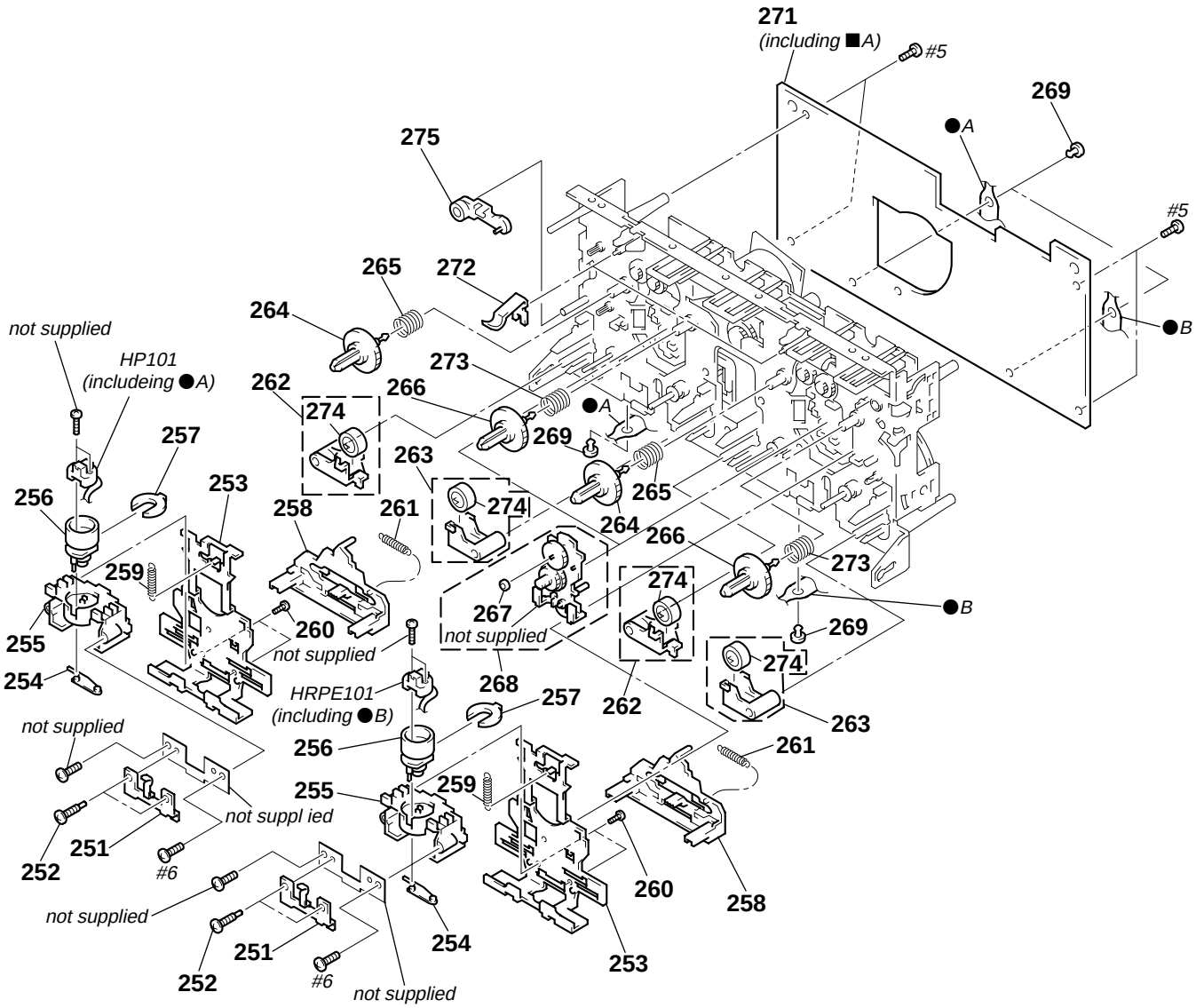
Ref. No.	Part No.	Description	Remark
* 151	1-663-994-11	TRANS BOARD (XB88K)	
* 151	1-668-169-11	TRANS BOARD (XB88AVK)	
⚠152	1-569-008-11	ADAPTOR, CONVERSION 2P (SP,MY,EA)	
⚠152	1-569-007-11	ADAPTOR, CONVERSION 2P (E,IA)	
153	3-703-244-00	BUSHING (FBS001), CORD (SP,MY,EA)	
153	3-703-571-11	BUSHING (S)(4516), CORD (TH)	
153	4-966-266-01	BUSHING (S)(FBS002), CORD (E,IA)	
* 154	A-4407-990-A	POWER BOARD, COMPLETE	
* 155	A-4407-236-A	MAIN BOARD, COMPLETE	
156	1-782-715-11	WIRE (FLAT TYPE) (19 CORE)	
157	X-4941-228-1	FOOT (F22125H-M)	
* 158	A-4407-216-A	SURROUND BOARD, COMPLETE	
* 159	4-988-533-01	HOLDER, PWB	
* 160	3-701-822-00	HOLDER, WIRE	
* 161	A-4407-214-A	KEYCON BOARD, COMPLETE	
* 162	4-944-316-01	HOLDER, PC BOARD	
⚠CNP901	1-558-943-41	CORD, POWER (E,IA)	
⚠CNP901	1-575-651-21	CORD, POWER (SP,MY,EA)	
⚠CNP901	1-751-326-21	CORD, POWER (TH)	
⚠T501	1-431-639-11	TRANSFORMER, POWER (XB88K)	
⚠T901	1-431-639-11	TRANSFORMER, POWER (XB88AVK)	

7-5. TC MECHANISM SECTION-1 (TCM-220WR2)



Ref. No.	Part No.	Description	Remark
201	X-4947-943-1	HOLDER (L) ASSY, CASSETTE	
202	X-4947-944-1	HOLDER (R) ASSY, CASSETTE	
203	4-959-231-11	SPRING (L), TORSION	
204	4-959-232-11	SPRING (R), TORSION	
205	3-354-963-01	DAMPER	
* 206	4-980-439-01	FULCLUM, HOLDER	
207	3-354-957-01	JOINT (LOCK LEVER)	
208	3-354-953-01	LEVER (LOCK LEVER L)	
209	3-354-954-01	LEVER (LOCK LEVER R)	
210	4-959-229-11	DETENT, CASSETTE	

7-6. TC MECHANISM SECTION-2 (TCM-220WR2)

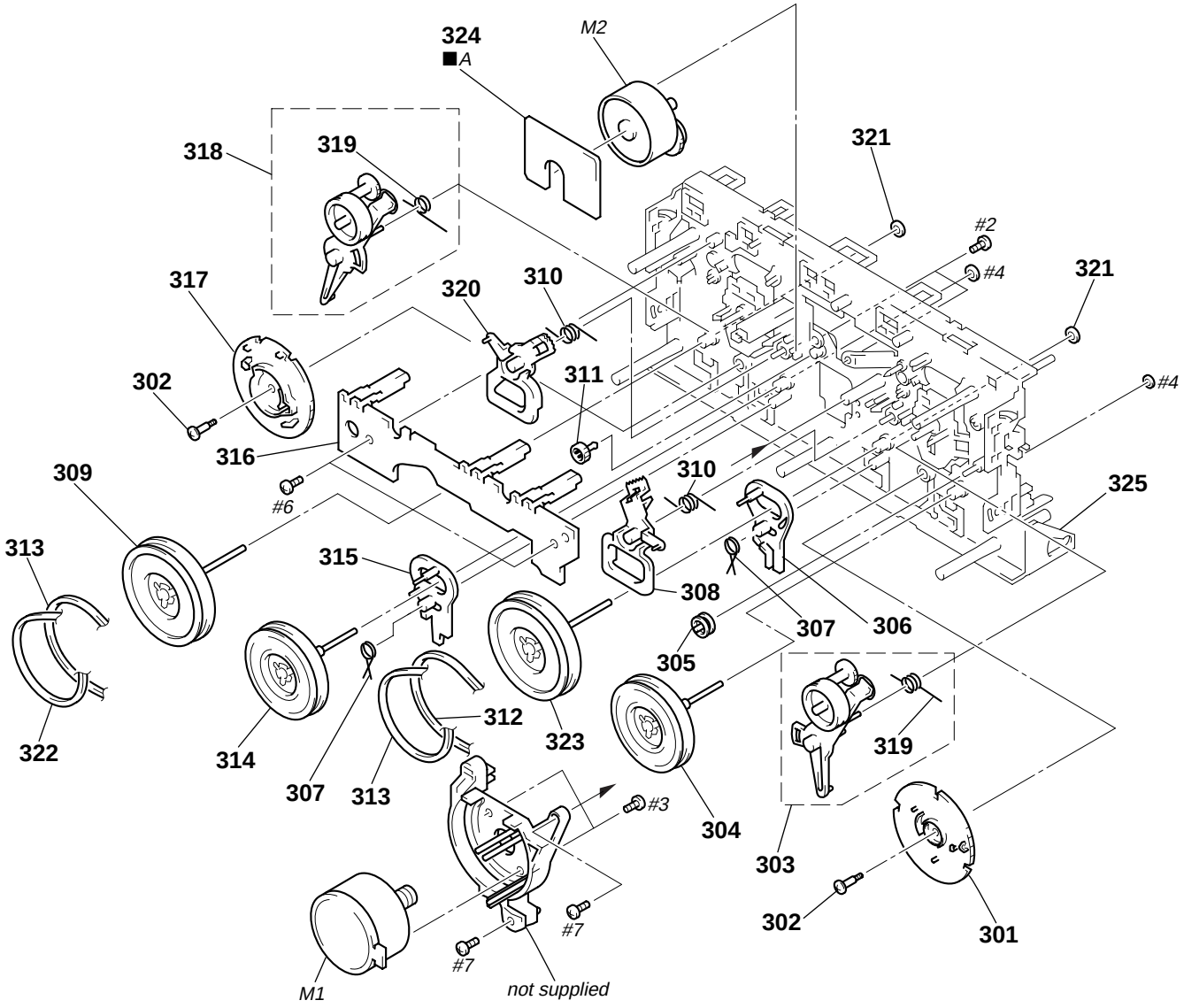


Ref. No.	Part No.	Description	Remark
251	3-908-560-01	SPRING, AZIMUTH ADJUSTMENT	
252	3-919-684-01	SCREW, AZIMUTH ADJUSTMENT	
* 253	X-3373-113-1	SLIDER (HEAD) ASSY	
254	3-009-956-11	SPRING, HEAD TOGGLE	
255	3-908-558-02	FITTING BLOCK, HEAD	
256	3-908-557-02	ROTARY BLOCK, HEAD	
* 257	3-908-559-01	STOPPER, AZIMUTH	
258	3-908-555-01	SLIDER (REV SLIDER)	
259	3-917-143-11	SPRING, TENSION	
260	3-388-848-01	SCREW (P2X6)(B TIGHT)	
261	3-939-371-01	SPRING (1), TENSION	
262	X-3369-909-1	PINCH LEVER (REV) ASSY	
263	X-3369-908-1	PINCH LEVER (FWD) ASSY	
264	3-908-613-01	GEAR (S), REEL	

Ref. No.	Part No.	Description	Remark
265	3-917-141-01	SPRING, COMPRESSION	
266	X-3371-305-1	REEL (T) ASSY	
267	3-669-465-01	WASHER (1.5), STOPPER	
268	X-3370-173-1	TU ASSY	
269	3-911-116-21	RIVET, PUSH	
* 271	A-2007-131-A	AUDIO BOARD, COMPLETE	
272	3-930-972-01	DETENT, HALF	
273	3-917-142-01	SPRING, COMPRESSION	
274	3-355-808-02	PINCH ROLLER	
275	3-938-863-01	STOPPER	
HP101	1-500-093-11	HEAD, MAGNETIC (PLAYBACK)	
HRPE101	1-500-094-11	HEAD, MAGNETIC (REC/PB/ERASE)	

7-7. TC MECHANISM SECTION-3 (TCM-220WR2)

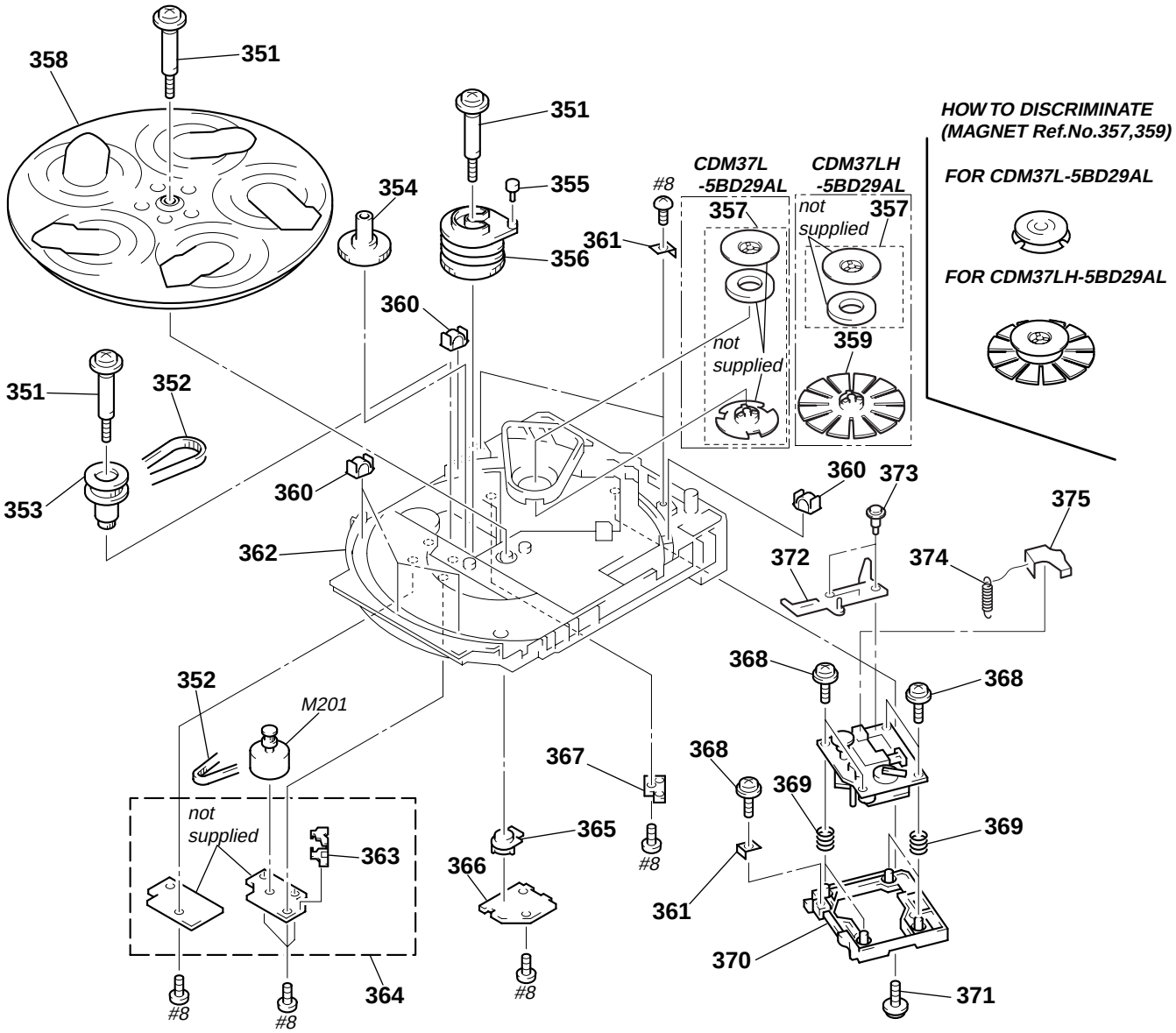
■A: MOTOR board (Suppplied with AUDIO board)



Ref. No.	Part No.	Description	Remark
301	3-908-597-01	CAM (A)	
302	3-908-608-11	SCREW, STEP	
303	X-3372-930-1	ARM (A) ASSY, FR	
304	X-3370-169-1	FLYWHEEL (AR) ASSY	
305	3-928-047-01	PULLEY, TENSION	
306	3-908-599-01	LEVER (REV-A)	
307	3-908-601-01	SPRING (REV LEVER), TORSION	
308	3-908-603-01	LEVER (TRIGGER A)	
309	X-3367-593-1	FLYWHEEL (BF) ASSY	
310	3-908-605-01	SPRING (TRIGGER), TORSION	
311	3-908-609-01	GEAR, TRIGGER	
312	3-913-845-11	BELT (A)	
313	3-913-846-11	BELT (FR)	
314	X-3370-171-1	FLYWHEEL (BR) ASSY	

Ref. No.	Part No.	Description	Remark
315	3-908-600-01	LEVER (REV-B)	
* 316	1-650-669-11	LEAF SWITCH BOARD	
317	3-908-598-01	CAM (B)	
318	X-3372-931-1	ARM (B) ASSY, FR	
319	3-911-114-01	SPRING (FR), TORSION	
320	3-908-604-01	LEVER (TRIGGER B)	
321	3-911-115-01	WASHER, STOPPER	
322	3-917-176-11	BELT (B)	
323	X-3370-172-1	FLYWHEEL (AF) ASSY	
* 324	A-2007-131-A	AUDIO BOARD, COMPLETE	
325	X-3371-441-1	CHASSIS ASSY, MECHANICAL	
M1	X-3371-223-1	MOTOR ASSY (CAPSTAN)	
M2	A-2004-410-A	MOTOR ASSY (TRIGGER)	

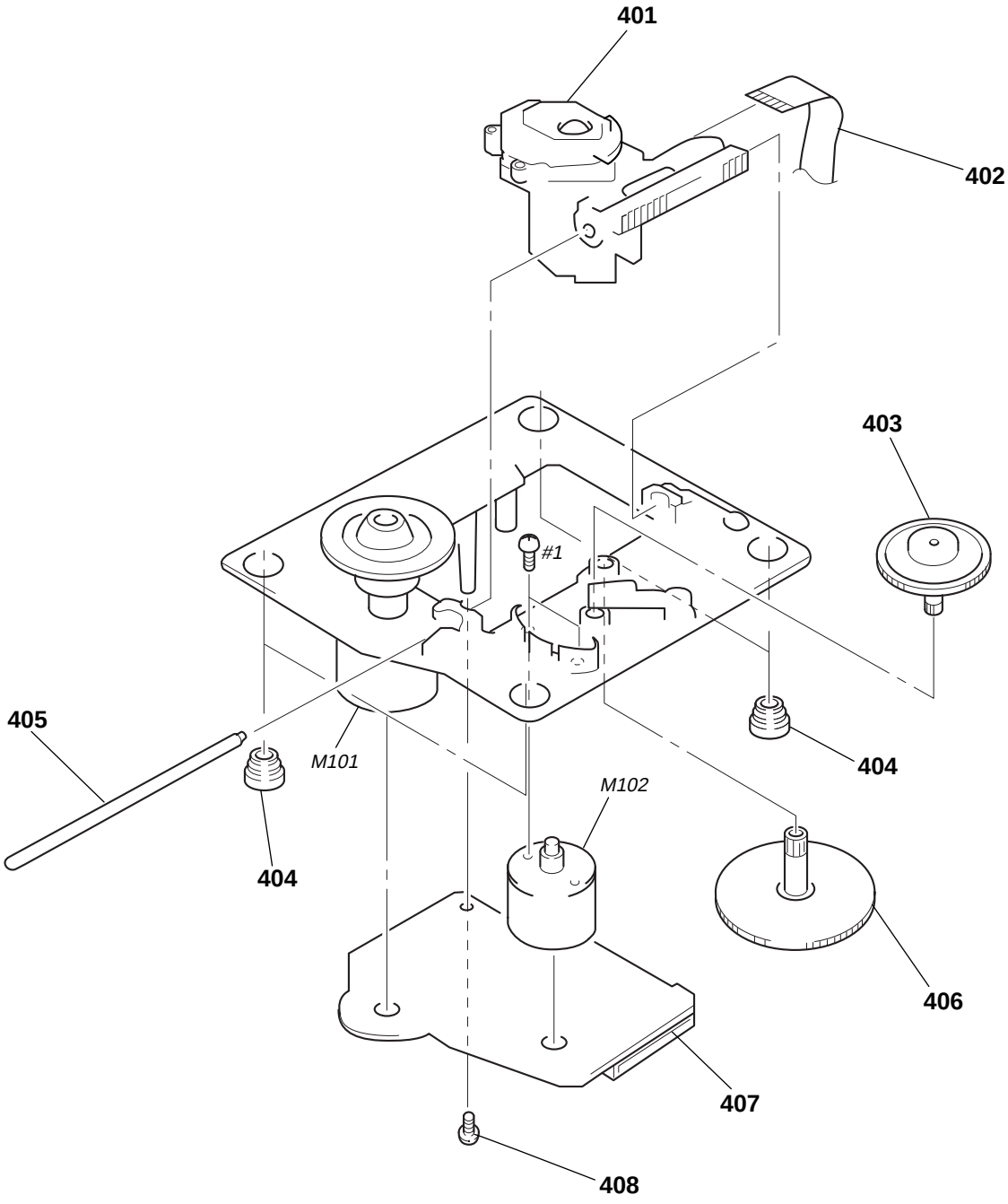
7-8. CD MECHANISM SECTION (CDM37L-5BD29AL/CMD37LH-5BD29AL)



Ref. No.	Part No.	Description	Remark
351	4-987-976-01	SCREW, STEP	
352	4-944-490-01	BELT (TIMING)	
353	A-4660-978-A	GEAR (PULLEY) ASSY	
354	4-978-421-01	GEAR (MID)	
355	4-978-425-01	ROLLER (CAM)	
356	4-978-420-01	CAM (HOLDER)	
* 357	1-452-879-11	MAGNET (CDM37L-5BD29AL)	
* 357	1-452-925-11	MAGNET ASSY (CDM37LH-5BD29AL)	
358	4-978-417-01	TABLE, DISC	
359	4-993-142-11	PULLEY (L), PRESS	
360	X-4947-960-1	ROLLER ASSY	
* 361	4-978-583-01	BRACKET (BU)	
* 362	4-978-418-01	CHASSIS	
* 363	4-980-385-01	HOLDER (SW)	

Ref. No.	Part No.	Description	Remark
* 364	A-4673-765-A	CD MOTOR BOARD, COMPLETE	
365	4-978-426-01	INDICATOR (NO.)	
* 366	1-659-059-13	LED BOARD	
* 367	1-659-058-13	TABLE SENSOR BOARD	
368	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
369	4-958-593-01	SPRING (BU), COMPRESSION	
* 370	4-978-419-01	HOLDER (BU-5)	
371	4-917-583-71	BRACKET, YOKE	
372	4-989-493-01	SLIDER (37)	
373	4-989-494-01	SCREW (SLIDER), STEP	
374	4-989-819-02	SPRING, TENSION	
375	4-989-491-21	COVER, LENS	
M201	A-4660-977-A	MOTOR ASSY (TABLE)	

7-9. BASE UNIT SECTION (BU-5BD29AL)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
⚠401	8-820-020-02	OPTICAL PICK-UP KSS-213D/Q-NP	
402	1-769-069-11	WIRE (FLAT TYPE)(16 CORE)	
403	4-917-567-01	GEAR (M)	
404	4-951-940-01	INSULATOR (BU)	
405	4-917-565-01	SHAFT, SLED	
406	4-917-564-01	GEAR (P), FLATNESS	
* 407	A-4699-522-A	BD BOARD, COMPLETE	
408	4-951-620-01	SCREW (2.6X8), +BVTP	
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	

SECTION 8
ELECTRICAL PARTS LIST

AUDIO

Note:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: µ , for example:
  uA...: µ A..., uPA...: µ PA..., uPB...: µ PB..., uPC...: µ PC..., uPD...: µ PD...
- CAPACITORS
  uF : µ F
- COILS
  uH : µ H
- Abbreviation
  EA : Saudi Arabia model
  SP : Singapore model
  MY : Malaysia model
  TH : Thai model
  IA : Indonesian model

Ref. No.	Part No.	Description			Remark
	A-2007-131-A	AUDIO BOARD, COMPLETE			
		**********			
		(including MOTOR board)			
		< CAPACITOR >			
C301	1-162-289-31	CERAMIC	390PF	10%	50V
C302	1-126-968-11	ELECT	100uF	20%	6.3V
C303	1-162-282-31	CERAMIC	100PF	10%	50V
C304	1-130-483-00	MYLAR	0.01uF	5%	50V
C305	1-107-715-11	ELECT	22uF	20%	16V
C311	1-162-289-31	CERAMIC	390PF	10%	50V
C313	1-162-282-31	CERAMIC	100PF	10%	50V
C314	1-130-487-00	MYLAR	0.022uF	5%	50V
C315	1-126-233-11	ELECT	22uF	20%	50V
C331	1-137-427-11	FILM	120PF	5%	50V
C332	1-162-288-31	CERAMIC	330PF	10%	50V
C333	1-162-209-31	CERAMIC	27PF	5%	50V
C401	1-162-289-31	CERAMIC	390PF	10%	50V
C402	1-126-968-11	ELECT	100uF	20%	6.3V
C403	1-162-282-31	CERAMIC	100PF	10%	50V
C404	1-130-483-00	MYLAR	0.01uF	5%	50V
C405	1-107-715-11	ELECT	22uF	20%	16V
C411	1-162-289-31	CERAMIC	390PF	10%	50V
C413	1-162-282-31	CERAMIC	100PF	10%	50V
C414	1-130-487-00	MYLAR	0.022uF	5%	50V
C415	1-126-233-11	ELECT	22uF	20%	50V
C431	1-137-427-11	FILM	120PF	5%	50V
C432	1-162-288-31	CERAMIC	330PF	10%	50V
C433	1-162-209-31	CERAMIC	27PF	5%	50V
C601	1-104-396-11	ELECT	10uF	20%	16V
C602	1-104-396-11	ELECT	10uF	20%	16V
C611	1-124-907-11	ELECT	10uF	20%	50V
C612	1-124-907-11	ELECT	10uF	20%	50V
C621	1-137-150-11	FILM	0.01uF	5%	100V
C622	1-126-961-11	ELECT	2.2uF	20%	50V
C623	1-136-155-00	FILM	0.015uF	5%	50V
C624	1-130-481-00	MYLAR	0.0068uF	5%	50V
C625	1-130-481-00	MYLAR	0.0068uF	5%	50V
C627	1-124-903-11	ELECT	1uF	20%	50V
C628	1-136-153-00	FILM	0.01uF	5%	50V
C642	1-104-664-11	ELECT	47uF	20%	16V
C651	1-161-494-00	CERAMIC	0.022uF		25V
		< CONNECTOR >			
CN601	1-695-382-31	PIN, CONNECTOR (PC BOARD) 21P			
CN602	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P			

Ref. No.	Part No.	Description			Remark
* CN651	1-564-521-11	PLUG, CONNECTOR 6P			
		< IC >			
IC601	8-759-111-44	IC UPC4570C-1			
IC602	8-759-143-54	IC UPC1330HA			
IC611	8-759-111-44	IC UPC4570C-1			
		< COIL >			
L331	1-410-780-11	INDUCTOR 27mH			
L431	1-410-780-11	INDUCTOR 27mH			
		< MOTOR >			
M2	A-2004-410-A	MOTOR ASSY (TRIGGER)			
		< TRANSISTOR >			
Q621	8-729-142-46	TRANSISTOR 2SC2001-LK			
Q622	8-729-142-46	TRANSISTOR 2SC2001-LK			
Q623	8-729-801-93	TRANSISTOR 2SD1387			
Q651	8-729-900-65	TRANSISTOR DTA144ES			
		< RESISTOR >			
R301	1-247-881-00	CARBON	120K	5%	1/4W
R302	1-249-409-11	CARBON	220	5%	1/4W F
R303	1-249-433-11	CARBON	22K	5%	1/4W
R304	1-247-889-00	CARBON	270K	5%	1/4W
R305	1-247-858-11	CARBON	13K	5%	1/4W
R311	1-247-881-00	CARBON	120K	5%	1/4W
R312	1-247-807-31	CARBON	100	5%	1/4W
R314	1-247-882-11	CARBON	130K	5%	1/4W
R315	1-247-850-11	CARBON	6.2K	5%	1/4W
R331	1-249-430-11	CARBON	12K	5%	1/4W
R401	1-247-881-00	CARBON	120K	5%	1/4W
R402	1-249-409-11	CARBON	220	5%	1/4W F
R403	1-249-433-11	CARBON	22K	5%	1/4W
R404	1-247-889-00	CARBON	270K	5%	1/4W
R405	1-247-858-11	CARBON	13K	5%	1/4W
R411	1-247-881-00	CARBON	120K	5%	1/4W
R412	1-247-807-31	CARBON	100	5%	1/4W
R414	1-247-882-11	CARBON	130K	5%	1/4W
R415	1-247-850-11	CARBON	6.2K	5%	1/4W
R431	1-249-430-11	CARBON	12K	5%	1/4W
R601	1-249-409-11	CARBON	220	5%	1/4W F
R602	1-249-409-11	CARBON	220	5%	1/4W F
R608	1-249-409-11	CARBON	220	5%	1/4W F
R609	1-249-433-11	CARBON	22K	5%	1/4W
R611	1-249-409-11	CARBON	220	5%	1/4W F

AUDIO BD

Ref. No.	Part No.	Description			Remark
R612	1-249-409-11	CARBON	220	5%	1/4W F
⚠R621	1-212-851-00	FUSIBLE	5.6	5%	1/4W F
⚠R622	1-212-851-00	FUSIBLE	5.6	5%	1/4W F
R623	1-249-432-11	CARBON	18K	5%	1/4W
R624	1-249-432-11	CARBON	18K	5%	1/4W
R625	1-249-429-11	CARBON	10K	5%	1/4W
R651	1-247-856-00	CARBON	11K	5%	1/4W
R652	1-247-856-00	CARBON	11K	5%	1/4W
R653	1-249-441-11	CARBON	100K	5%	1/4W
		< VARIABLE RESISTOR >			
RV301	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV311	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV341	1-238-551-11	RES, ADJ, CARBON 220K			
RV401	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV411	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV441	1-238-551-11	RES, ADJ, CARBON 220K			
RV651	1-238-599-11	RES, ADJ, CARBON 4.7K			
RV652	1-238-599-11	RES, ADJ, CARBON 4.7K			
		< TRANSFORMER >			
T621	1-423-980-11	TRANSFORMER, BIAS OSCILLATION			

****

	A-4699-522-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-126-607-11	ELECT CHIP	47uF	20%	4V
C102	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C103	1-164-346-11	CERAMIC CHIP	1uF		16V
C105	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C106	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C107	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C108	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C109	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C111	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C112	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C113	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C114	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C115	1-126-607-11	ELECT CHIP	47uF	20%	4V
C116	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
C117	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C118	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C119	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C120	1-124-779-00	ELECT CHIP	10uF	20%	16V
C121	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C122	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C123	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C124	1-126-607-11	ELECT CHIP	47uF	20%	4V
C125	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C126	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C127	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C128	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C129	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C130	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C131	1-164-346-11	CERAMIC CHIP	1uF		16V
C140	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C154	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C161	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C162	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C163	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C164	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C165	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C166	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C167	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C168	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C169	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C170	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C171	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C173	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C174	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C175	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C176	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C177	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C178	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C179	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C181	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C182	1-126-393-11	ELECT CHIP	33uF	20%	10V
C183	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C185	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C188	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C189	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
		< CONNECTOR >			
CNU101	1-770-014-11	CONNECTOR, FFC/FPC 16P			
CNU102	1-778-874-11	CONNECTOR,FFC(LIF(NON-ZIF))19P			
		< FERRITE BEAD >			
FB101	1-414-234-11	INDUCTOR CHIP 0UH			
FB103	1-414-234-11	INDUCTOR CHIP 0UH			
		< IC >			
IC101	8-752-080-62	IC CXA1992AR			
IC102	8-759-429-32	IC BA5941FP-E2			
IC103	8-752-378-66	IC CXD2519Q			
		< JUMPER RESISTOR >			
JW101	1-216-295-91	SHORT 0			
JW104	1-216-295-91	SHORT 0			
		< MOTOR >			
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)			
M102	X-4917-504-1	MOTOR ASSY (SLED)			
		< TRANSISTOR >			
Q101	8-729-010-08	TRANSISTOR MSB710-R			
		< RESISTOR >			
R102	1-216-001-00	METAL CHIP	10	5%	1/10W
R104	1-216-093-00	METAL CHIP	68K	5%	1/10W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remark
R105	1-216-088-00	METAL CHIP	43K	5%	1/10W
R106	1-216-088-00	METAL CHIP	43K	5%	1/10W
R107	1-216-088-00	METAL CHIP	43K	5%	1/10W
R108	1-216-088-00	METAL CHIP	43K	5%	1/10W
R109	1-216-093-00	METAL CHIP	68K	5%	1/10W
R114	1-216-101-00	METAL CHIP	150K	5%	1/10W
R115	1-216-101-00	METAL CHIP	150K	5%	1/10W
R116	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R117	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R118	1-216-063-91	RES,CHIP	3.9K	5%	1/10W
R119	1-216-085-00	METAL CHIP	33K	5%	1/10W
R120	1-216-089-91	RES,CHIP	47K	5%	1/10W
R121	1-216-114-00	RES,CHIP	510K	5%	1/10W
R122	1-216-097-91	RES,CHIP	100K	5%	1/10W
R123	1-216-099-00	METAL CHIP	120K	5%	1/10W
R124	1-216-091-00	METAL CHIP	56K	5%	1/10W
R125	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R126	1-216-063-91	RES,CHIP	3.9K	5%	1/10W
R127	1-216-089-91	RES,CHIP	47K	5%	1/10W
R128	1-216-098-00	METAL CHIP	110K	5%	1/10W
R129	1-216-025-91	RES,CHIP	100	5%	1/10W
R130	1-216-079-00	METAL CHIP	18K	5%	1/10W
R131	1-216-079-00	METAL CHIP	18K	5%	1/10W
R132	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R133	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R134	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R135	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R136	1-216-073-00	METAL CHIP	10K	5%	1/10W
R137	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R138	1-216-025-91	RES,CHIP	100	5%	1/10W
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W
R157	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R158	1-216-001-00	METAL CHIP	10	5%	1/10W
R159	1-216-121-91	RES,CHIP	1M	5%	1/10W
R161	1-216-097-91	RES,CHIP	100K	5%	1/10W
R162	1-216-073-00	METAL CHIP	10K	5%	1/10W
R163	1-216-121-91	RES,CHIP	1M	5%	1/10W
R164	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R165	1-216-049-91	RES,CHIP	1K	5%	1/10W
R166	1-216-073-00	METAL CHIP	10K	5%	1/10W
R167	1-216-081-00	METAL CHIP	22K	5%	1/10W
R168	1-216-073-00	METAL CHIP	10K	5%	1/10W
R169	1-216-079-00	METAL CHIP	18K	5%	1/10W
R170	1-216-081-00	METAL CHIP	22K	5%	1/10W
R171	1-216-073-00	METAL CHIP	10K	5%	1/10W
R172	1-216-079-00	METAL CHIP	18K	5%	1/10W
R173	1-216-025-91	RES,CHIP	100	5%	1/10W
R174	1-216-033-00	METAL CHIP	220	5%	1/10W
R175	1-216-025-91	RES,CHIP	100	5%	1/10W
R176	1-216-025-91	RES,CHIP	100	5%	1/10W
R177	1-216-025-91	RES,CHIP	100	5%	1/10W
R178	1-216-025-91	RES,CHIP	100	5%	1/10W
R179	1-216-025-91	RES,CHIP	100	5%	1/10W
R180	1-216-025-91	RES,CHIP	100	5%	1/10W
R181	1-216-025-91	RES,CHIP	100	5%	1/10W
R188	1-216-037-00	METAL CHIP	330	5%	1/10W
R190	1-216-097-91	RES,CHIP	100K	5%	1/10W
R191	1-216-105-91	RES,CHIP	220K	5%	1/10W

< SWITCH >

S101	1-572-085-11	SWITCH, LEAF (LIMIT)

< VIBRATOR >

X101	1-767-408-21	VIBRATOR, CRYSTAL (16.9344MHz)

****

*	1-664-019-11	CD-A SW BOARD

****

< DIODE >

D641	8-719-058-04	DIODE SEL5223S-TP15 (NON-STOP)

< RESISTOR >

R731	1-249-411-11	CARBON	330	5%	1/4W
R732	1-249-413-11	CARBON	470	5%	1/4W F
R733	1-249-415-11	CARBON	680	5%	1/4W F
R734	1-249-417-11	CARBON	1K	5%	1/4W F
R735	1-249-419-11	CARBON	1.5K	5%	1/4W F
R736	1-249-421-11	CARBON	2.2K	5%	1/4W F
R737	1-249-417-11	CARBON	1K	5%	1/4W F
R741	1-247-807-31	CARBON	100	5%	1/4W

< SWITCH >

S661	1-554-303-21	SWITCH, TACTILE (DISC 1)
S662	1-554-303-21	SWITCH, TACTILE (DISC 2)
S663	1-554-303-21	SWITCH, TACTILE (DISC 3)
S664	1-554-303-21	SWITCH, TACTILE (DISC 4)
S665	1-554-303-21	SWITCH, TACTILE (DISC 5)
S666	1-554-303-21	SWITCH, TACTILE (FLASH)
S667	1-554-303-21	SWITCH, TACTILE (NON-STOP)
S668	1-554-303-21	SWITCH, TACTILE (LOOP)

****

*	1-664-020-11	CD-B1 SW BOARD

****

< CONNECTOR >

* CN642	1-568-943-11	PIN, CONNECTOR 5P

< DIODE >

D645	8-719-057-29	DIODE SML78423C-TP15 (▷)
D646	8-719-057-97	DIODE SEL5923A-TP15 (▮▮)
D647	8-719-057-29	DIODE SML78423C-TP15 (▷)

< RESISTOR >

R745	1-247-815-91	CARBON	220	5%	1/4W
R746	1-249-411-11	CARBON	330	5%	1/4W
R747	1-249-413-11	CARBON	470	5%	1/4W F
R748	1-249-415-11	CARBON	680	5%	1/4W F
R749	1-247-807-31	CARBON	100	5%	1/4W
R750	1-247-807-31	CARBON	100	5%	1/4W
R751	1-247-807-31	CARBON	100	5%	1/4W

CD-B1 SW **CD-B2 SW** **CD-LED** **CD MOTOR** **DOOR SW** **HP/MIC**

Ref. No.	Part No.	Description				Remark
		< SWITCH >				
S676	1-554-303-21	SWITCH, TACTILE (▷)				
S677	1-554-303-21	SWITCH, TACTILE (■)				
S678	1-554-303-21	SWITCH, TACTILE (❚❚)				
S679	1-554-303-21	SWITCH, TACTILE (DISC SKIP)				
**********						
*	1-664-021-11	CD-B2 SW BOARD				
		**********				
		< RESISTOR >				
R752	1-249-417-11	CARBON	1K	5%	1/4W	F
R753	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R754	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R755	1-247-843-11	CARBON	3.3K	5%	1/4W	
R756	1-249-427-11	CARBON	6.8K	5%	1/4W	F
		< SWITCH >				
S681	1-554-303-21	SWITCH, TACTILE (▶▶)				
S682	1-554-303-21	SWITCH, TACTILE (REPEAT)				
S683	1-554-303-21	SWITCH, TACTILE (PLAY MODE)				
S684	1-554-303-21	SWITCH, TACTILE (1/ALL DISCS)				
S685	1-554-303-21	SWITCH, TACTILE (EDIT)				
S686	1-554-303-21	SWITCH, TACTILE (◀◀)				
S711	1-467-968-11	ENCODER, ROTARY (⏮ AMS ⏭)				
**********						
*	1-664-017-11	CD-LED BOARD				
		**********				
		< CONNECTOR >				
CN671	1-506-481-11	PIN, CONNECTOR 2P				
		< DIODE >				
D671	8-719-058-03	DIODE SEL5423E-TP15 (DISC TABLE)				
D672	8-719-058-03	DIODE SEL5423E-TP15 (DISC TABLE)				
D673	8-719-058-03	DIODE SEL5423E-TP15 (DISC TABLE)				
D674	8-719-058-03	DIODE SEL5423E-TP15 (DISC TABLE)				
		< RESISTOR >				
R791	1-249-412-11	CARBON	390	5%	1/4W	F
**********						
*	A-4673-765-A	CD MOTOR BOARD, COMPLETE				
		**********				
*	4-980-385-01	HOLDER (SW)				
		< CAPACITOR >				
C201	1-124-907-11	ELECT	10uF	20%	50V	
C202	1-164-159-21	CERAMIC	0.1uF		50V	
C203	1-124-907-11	ELECT	10uF	20%	50V	
		< CONNECTOR >				
* CN201	1-568-947-11	PIN, CONNECTOR 9P				

Ref. No.	Part No.	Description				Remark
		< IC >				
IC201	8-759-365-94	IC TA8409S				
		< COIL >				
L201	1-408-117-00	INDUCTOR 10uH				
		< MOTOR >				
M201	A-4660-977-A	MOTOR ASSY (TABLE)				
		< RESISTOR >				
R205	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R206	1-249-425-11	CARBON	4.7K	5%	1/4W	F
		< SWITCH >				
S201	1-762-587-11	SWITCH, PUSH (1 KEY)(UP)				
**********						
*	1-664-016-11	DOOR SW BOARD				
		**********				
		< CAPACITOR >				
C691	1-164-159-21	CERAMIC	0.1uF		50V	
		< CONNECTOR >				
CN661	1-506-481-11	PIN, CONNECTOR 2P				
		< SWITCH >				
S691	1-771-057-11	SWITCH, PUSH (1 KEY)(⏏ OPEN)				
**********						
*	A-4403-916-A	HP/MIC BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C760	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C761	1-126-961-11	ELECT	2.2uF	20%	50V	
C762	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C763	1-126-961-11	ELECT	2.2uF	20%	50V	
C764	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C765	1-162-215-31	CERAMIC	47PF	5%	50V	
C766	1-162-290-31	CERAMIC	470PF	10%	50V	
C767	1-162-215-31	CERAMIC	47PF	5%	50V	
C768	1-126-961-11	ELECT	2.2uF	20%	50V	
C769	1-162-282-31	CERAMIC	100PF	10%	50V	
C770	1-126-961-11	ELECT	2.2uF	20%	50V	
C771	1-126-959-11	ELECT	0.47uF	20%	50V	
C773	1-126-964-11	ELECT	10uF	20%	50V	
C774	1-126-964-11	ELECT	10uF	20%	50V	
C775	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C776	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C777	1-126-960-11	ELECT	1uF	20%	50V	
C778	1-162-305-11	CERAMIC	0.0068uF	30%	16V	
C779	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C780	1-136-495-11	FILM	0.068uF	5%	50V	

Ref. No.	Part No.	Description			Remark
C781	1-126-957-11	ELECT	0.22uF	20%	50V
C782	1-126-957-11	ELECT	0.22uF	20%	50V
C783	1-126-967-11	ELECT	47uF	20%	10V
C784	1-136-495-11	FILM	0.068uF	5%	50V
C785	1-162-305-11	CERAMIC	0.0068uF	30%	16V
C786	1-162-294-31	CERAMIC	0.001uF	10%	50V
C787	1-124-250-11	ELECT	0.15uF	20%	50V
C788	1-126-960-11	ELECT	1uF	20%	50V
C789	1-161-494-00	CERAMIC	0.022uF		25V
C790	1-126-967-11	ELECT	47uF	20%	10V
C791	1-164-159-21	CERAMIC	0.1uF		50V
C794	1-164-159-21	CERAMIC	0.1uF		50V
C795	1-164-159-21	CERAMIC	0.1uF		50V
C797	1-162-302-11	CERAMIC	0.0022uF	20%	16V
C798	1-164-159-21	CERAMIC	0.1uF		50V
C799	1-164-159-21	CERAMIC	0.1uF		50V
		< CONNECTOR >			
* CN701	1-568-935-11	PIN, CONNECTOR 8P			
		< DIODE >			
D761	8-719-200-82	DIODE 11ES2			
D762	8-719-200-82	DIODE 11ES2			
D763	8-719-200-82	DIODE 11ES2			
		< IC >			
IC760	8-759-634-51	IC M5218AP			
IC761	8-759-450-96	IC M65850P			
		< JACK >			
J760	1-770-226-41	JACK (LARGE TYPE)(PHONES)			
J761	1-770-226-41	JACK (LARGE TYPE)(MIC 1)			
J762	1-770-226-41	JACK (LARGE TYPE)(MIC 2)			
		< COIL >			
L761	1-410-521-11	INDUCTOR 100uH			
		< RESISTOR >			
R760	1-249-429-11	CARBON	10K	5%	1/4W
R761	1-249-417-11	CARBON	1K	5%	1/4W F
R762	1-249-429-11	CARBON	10K	5%	1/4W
R763	1-249-417-11	CARBON	1K	5%	1/4W F
R764	1-249-441-11	CARBON	100K	5%	1/4W
R765	1-249-417-11	CARBON	1K	5%	1/4W F
R766	1-249-437-11	CARBON	47K	5%	1/4W
R767	1-249-429-11	CARBON	10K	5%	1/4W
R768	1-249-431-11	CARBON	15K	5%	1/4W
R769	1-247-885-00	CARBON	180K	5%	1/4W
R770	1-247-807-31	CARBON	100	5%	1/4W
R771	1-247-863-91	CARBON	22K	5%	1/4W
R772	1-247-863-91	CARBON	22K	5%	1/4W
R773	1-247-863-91	CARBON	22K	5%	1/4W
R774	1-247-881-00	CARBON	120K	5%	1/4W
R775	1-247-863-91	CARBON	22K	5%	1/4W
R776	1-247-863-91	CARBON	22K	5%	1/4W
R777	1-247-863-91	CARBON	22K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R778	1-249-437-11	CARBON	47K	5%	1/4W
R779	1-249-431-11	CARBON	15K	5%	1/4W
		< VARIABLE RESISTOR >			
RV760	1-225-366-11	RES, VAR, CARBON 50K (MIC LEVEL)			
RV761	1-225-366-11	RES, VAR, CARBON 50K (ECHO LEVEL)			
**********					
*	A-4407-214-A	KEYCON BOARD, COMPLETE **********			
		< CAPACITOR >			
C1401	1-164-159-21	CERAMIC	0.1uF		50V
C1403	1-126-964-11	ELECT	10uF	20%	50V
C1404	1-126-964-11	ELECT	10uF	20%	50V
C1405	1-126-964-11	ELECT	10uF	20%	50V
C1406	1-126-964-11	ELECT	10uF	20%	50V
C1431	1-130-493-00	MYLAR	0.068uF	5%	50V
C1432	1-130-493-00	MYLAR	0.068uF	5%	50V
C1433	1-130-493-00	MYLAR	0.068uF	5%	50V
C1434	1-162-284-31	CERAMIC	150PF	10%	50V
C1436	1-126-967-11	ELECT	47uF	20%	10V
C1437	1-164-159-21	CERAMIC	0.1uF		50V
C1438	1-104-665-11	ELECT	100uF	20%	10V
C1439	1-126-964-11	ELECT	10uF	20%	50V
C1445	1-136-165-00	FILM	0.1uF	5%	50V
C1446	1-136-165-00	FILM	0.1uF	5%	50V
C1448	1-126-964-11	ELECT	10uF	20%	50V
C1451	1-162-286-21	CERAMIC	220PF	10%	50V
C1454	1-162-286-21	CERAMIC	220PF	10%	50V
C1461	1-162-294-31	CERAMIC	0.001uF	10%	50V
C1462	1-162-306-11	CERAMIC	0.01uF	20%	16V
C1466	1-162-600-11	CERAMIC	0.0047uF	20%	16V
C1467	1-162-291-31	CERAMIC	560PF	10%	50V
C1468	1-162-290-31	CERAMIC	470PF	10%	50V
C1472	1-162-600-11	CERAMIC	0.0047uF	20%	16V
		< CONNECTOR >			
CN1401	1-566-999-11	PIN, CONNECTOR 13P			
		< IC >			
IC1401	8-759-370-84	IC M65847FP-TP			
IC1403	8-759-300-71	IC HD14053BFP			
		< COIL >			
L1401	1-410-521-11	INDUCTOR 100uH			
		< TRANSISTOR >			
Q1401	8-729-029-66	TRANSISTOR DTC114ESA			
Q1403	8-729-620-05	TRANSISTOR 2SC2603-EF			
		< RESISTOR >			
R1413	1-247-863-91	CARBON	22K	5%	1/4W
R1414	1-247-863-91	CARBON	22K	5%	1/4W
R1417	1-249-429-11	CARBON	10K	5%	1/4W
R1418	1-249-425-11	CARBON	4.7K	5%	1/4W F

KEYCON **LEAF SWITCH** **LED** **MAIN**

Ref. No.	Part No.	Description			Remark
R1419	1-249-425-11	CARBON	4.7K	5%	1/4W F
R1421	1-249-417-11	CARBON	1K	5%	1/4W F
R1422	1-249-429-11	CARBON	10K	5%	1/4W
R1431	1-247-903-00	CARBON	1M	5%	1/4W
R1435	1-247-807-31	CARBON	100	5%	1/4W
R1436	1-249-429-11	CARBON	10K	5%	1/4W
R1437	1-249-425-11	CARBON	4.7K	5%	1/4W F
R1438	1-247-807-31	CARBON	100	5%	1/4W
R1448	1-249-429-11	CARBON	10K	5%	1/4W
R1450	1-249-441-11	CARBON	100K	5%	1/4W
R1451	1-249-429-11	CARBON	10K	5%	1/4W
R1452	1-249-425-11	CARBON	4.7K	5%	1/4W F
R1453	1-249-429-11	CARBON	10K	5%	1/4W
R1457	1-249-424-11	CARBON	3.9K	5%	1/4W F
R1458	1-249-431-11	CARBON	15K	5%	1/4W
R1459	1-249-429-11	CARBON	10K	5%	1/4W
R1460	1-247-863-91	CARBON	22K	5%	1/4W

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*	1-650-669-11	LEAF SWITCH BOARD	
		**********	
		< CONNECTOR >	
* CN1001	1-568-854-11	SOCKET, CONNECTOR 11P	
		< TRANSISTOR >	
Q1001	8-749-010-90	TRANSISTOR PHOTO REFLECTOR	NJL5165KA-H2
Q1002	8-749-010-90	TRANSISTOR PHOTO REFLECTOR	NJL5165KA-H2
		< RESISTOR >	
R1001	1-247-818-11	CARBON 300 5%	1/4W
R1002	1-247-820-11	CARBON 360 5%	1/4W
R1003	1-249-414-11	CARBON 560 5%	1/4W F
R1004	1-247-834-11	CARBON 1.3K 5%	1/4W
R1005	1-247-818-11	CARBON 300 5%	1/4W
		< SWITCH >	
S1001	1-692-832-11	SWITCH, PUSH (1 KEY)(A PLAY)	
S1002	1-692-832-11	SWITCH, PUSH (1 KEY)(B PLAY)	
S1003	1-572-248-11	SWITCH, LEAF (A HALF)	
S1004	1-571-281-21	SWITCH, LEAF (A CrO_2)	
S1005	1-571-281-21	SWITCH, LEAF (REC A)	
S1006	1-572-248-11	SWITCH, LEAF (B HALF)	
S1008	1-571-281-21	SWITCH, LEAF (B CrO_2)	
S1009	1-571-281-21	SWITCH, LEAF (REC B)	

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*	1-659-059-13	LED BOARD	
		**********	
		< DIODE >	
D201	8-719-032-98	DIODE SEL5820A (DISC NO.)	
		< TRANSISTOR >	
Q201	8-729-119-78	TRANSISTOR 2SC403SP-51	
		< RESISTOR >	
R201	1-247-863-91	CARBON 22K 5%	1/4W
R202	1-249-411-11	CARBON 330 5%	1/4W
R203	1-249-437-11	CARBON 47K 5%	1/4W

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*	A-4407-236-A	MAIN BOARD, COMPLETE	
		**********	
		< CAPACITOR >	
C101	1-162-288-31	CERAMIC 330PF 10%	50V
C103	1-162-282-31	CERAMIC 100PF 10%	50V
C104	1-162-282-31	CERAMIC 100PF 10%	50V
C105	1-126-961-11	ELECT 2.2uF 20%	50V
C106	1-130-479-00	MYLAR 0.0047uF 5%	50V
C107	1-130-473-00	MYLAR 0.0015uF 5%	50V
C108	1-136-159-00	FILM 0.033uF 5%	50V
C109	1-126-933-11	ELECT 100uF 20%	16V
C110	1-162-306-11	CERAMIC 0.01uF 20%	16V
C111	1-162-306-11	CERAMIC 0.01uF 20%	16V
C114	1-162-306-11	CERAMIC 0.01uF 20%	16V
C121	1-162-286-21	CERAMIC 220PF 10%	50V
C122	1-162-286-21	CERAMIC 220PF 10%	50V
C125	1-109-889-11	ELECT 1uF 20%	50V
C150	1-162-306-11	CERAMIC 0.01uF 20%	16V
C151	1-162-288-31	CERAMIC 330PF 10%	50V
C153	1-162-282-31	CERAMIC 100PF 10%	50V
C154	1-162-282-31	CERAMIC 100PF 10%	50V
C155	1-126-961-11	ELECT 2.2uF 20%	50V
C156	1-130-479-00	MYLAR 0.0047uF 5%	50V
C157	1-130-473-00	MYLAR 0.0015uF 5%	50V
C158	1-136-159-00	FILM 0.033uF 5%	50V
C159	1-126-933-11	ELECT 100uF 20%	16V
C164	1-162-306-11	CERAMIC 0.01uF 20%	16V
C171	1-162-286-21	CERAMIC 220PF 10%	50V
C172	1-162-286-21	CERAMIC 220PF 10%	50V
C201	1-136-167-00	FILM 0.15uF 5%	50V
C202	1-136-167-00	FILM 0.15uF 5%	50V
C203	1-130-493-00	MYLAR 0.068uF 5%	50V
C204	1-130-493-00	MYLAR 0.068uF 5%	50V
C205	1-130-486-00	MYLAR 0.018uF 10%	50V
C206	1-130-486-00	MYLAR 0.018uF 10%	50V
C207	1-130-480-00	MYLAR 0.0056uF 5%	50V
C208	1-130-479-00	MYLAR 0.0047uF 5%	50V
C209	1-130-474-00	MYLAR 0.0018uF 5%	50V
C210	1-126-964-11	ELECT 10uF 20%	50V
C211	1-126-964-11	ELECT 10uF 20%	50V
C212	1-136-169-00	FILM 0.22uF 5%	50V
C213	1-136-169-00	FILM 0.22uF 5%	50V
C214	1-126-964-11	ELECT 10uF 20%	50V
C215	1-136-153-00	FILM 0.01uF 5%	50V
C230	1-136-167-00	FILM 0.15uF 5%	50V
C231	1-130-471-00	MYLAR 0.001uF 5%	50V

Ref. No.	Part No.	Description			Remark
C234	1-126-925-11	ELECT	470uF	20%	10V
C235	1-164-159-21	CERAMIC	0.1uF		50V
C237	1-126-964-11	ELECT	10uF	20%	50V
C238	1-162-286-21	CERAMIC	220PF	10%	50V
C239	1-162-306-11	CERAMIC	0.01uF	20%	16V
C241	1-162-306-11	CERAMIC	0.01uF	20%	16V
C242	1-126-925-11	ELECT	470uF	20%	10V
C247	1-162-306-11	CERAMIC	0.01uF	20%	16V
C248	1-126-964-11	ELECT	10uF	20%	50V
C251	1-136-167-00	FILM	0.15uF	5%	50V
C252	1-136-167-00	FILM	0.15uF	5%	50V
C253	1-130-493-00	MYLAR	0.068uF	5%	50V
C254	1-130-493-00	MYLAR	0.068uF	5%	50V
C255	1-130-486-00	MYLAR	0.018uF	10%	50V
C256	1-130-486-00	MYLAR	0.018uF	10%	50V
C257	1-130-480-00	MYLAR	0.0056uF	5%	50V
C258	1-130-479-00	MYLAR	0.0047uF	5%	50V
C259	1-130-474-00	MYLAR	0.0018uF	5%	50V
C260	1-126-964-11	ELECT	10uF	20%	50V
C261	1-126-964-11	ELECT	10uF	20%	50V
C262	1-136-169-00	FILM	0.22uF	5%	50V
C263	1-136-169-00	FILM	0.22uF	5%	50V
C264	1-126-964-11	ELECT	10uF	20%	50V
C265	1-136-153-00	FILM	0.01uF	5%	50V
C275	1-162-294-31	CERAMIC	0.001uF	10%	50V
C301	1-130-479-00	MYLAR	0.0047uF	5%	50V
C302	1-162-290-31	CERAMIC	470PF	10%	50V
C303	1-130-495-00	MYLAR	0.1uF	5%	50V
C304	1-126-964-11	ELECT	10uF	20%	50V
C305	1-126-960-11	ELECT	1uF	20%	50V
C307	1-126-964-11	ELECT	10uF	20%	50V
C308	1-126-964-11	ELECT	10uF	20%	50V
C309	1-126-960-11	ELECT	1uF	20%	50V
C310	1-104-665-11	ELECT	100uF	20%	10V
C351	1-130-479-00	MYLAR	0.0047uF	5%	50V
C352	1-162-290-31	CERAMIC	470PF	10%	50V
C353	1-130-495-00	MYLAR	0.1uF	5%	50V
C355	1-126-960-11	ELECT	1uF	20%	50V
C357	1-126-964-11	ELECT	10uF	20%	50V
C358	1-126-964-11	ELECT	10uF	20%	50V
C359	1-126-960-11	ELECT	1uF	20%	50V
C360	1-104-665-11	ELECT	100uF	20%	10V
C401	1-164-159-21	CERAMIC	0.1uF		50V
C402	1-164-159-21	CERAMIC	0.1uF		50V
C403	1-164-159-21	CERAMIC	0.1uF		50V
C404	1-126-933-11	ELECT	100uF	20%	16V
C405	1-126-767-11	ELECT	1000uF	20%	16V
C601	1-136-167-00	FILM	0.15uF	5%	50V
C602	1-136-167-00	FILM	0.15uF	5%	50V
C603	1-126-962-11	ELECT	3.3uF	20%	50V
C604	1-126-962-11	ELECT	3.3uF	20%	50V
C605	1-136-167-00	FILM	0.15uF	5%	50V
C606	1-136-167-00	FILM	0.15uF	5%	50V
C607	1-126-963-11	ELECT	4.7uF	20%	50V
C608	1-126-963-11	ELECT	4.7uF	20%	50V
C609	1-136-173-00	FILM	0.47uF	5%	50V
C610	1-136-173-00	FILM	0.47uF	5%	50V

Ref. No.	Part No.	Description			Remark
C611	1-126-963-11	ELECT	4.7uF	20%	50V
C612	1-126-963-11	ELECT	4.7uF	20%	50V
C613	1-136-173-00	FILM	0.47uF	5%	50V
C614	1-136-173-00	FILM	0.47uF	5%	50V
C615	1-136-165-00	FILM	0.1uF	5%	50V
C616	1-136-165-00	FILM	0.1uF	5%	50V
C617	1-136-165-00	FILM	0.1uF	5%	50V
C618	1-136-165-00	FILM	0.1uF	5%	50V
C619	1-126-960-11	ELECT	1uF	20%	50V
C620	1-126-960-11	ELECT	1uF	20%	50V
C621	1-126-934-11	ELECT	220uF	20%	10V
C622	1-126-964-11	ELECT	10uF	20%	50V
C623	1-126-964-11	ELECT	10uF	20%	50V
C624	1-126-964-11	ELECT	10uF	20%	50V
C625	1-126-964-11	ELECT	10uF	20%	50V
C626	1-126-934-11	ELECT	220uF	20%	10V
C627	1-136-161-00	FILM	0.047uF	5%	50V
C628	1-136-157-00	FILM	0.022uF	5%	50V
C629	1-162-292-31	CERAMIC	680PF	10%	50V
C630	1-126-933-11	ELECT	100uF	20%	16V
C631	1-162-306-11	CERAMIC	0.01uF	20%	16V
C632	1-126-964-11	ELECT	10uF	20%	50V
C633	1-136-173-00	FILM	0.47uF	5%	50V
C634	1-104-664-11	ELECT	47uF	20%	25V
C635	1-130-467-00	MYLAR	470PF	5%	50V
C636	1-130-467-00	MYLAR	470PF	5%	50V
C637	1-162-306-11	CERAMIC	0.01uF	20%	16V
C638	1-162-306-11	CERAMIC	0.01uF	20%	16V
C641	1-136-171-00	FILM	0.33uF	5%	50V
C642	1-136-159-00	FILM	0.033uF	5%	50V
C643	1-162-306-11	CERAMIC	0.01uF	20%	16V
C644	1-126-933-11	ELECT	100uF	20%	16V
C645	1-126-961-11	ELECT	2.2uF	20%	50V
C646	1-162-286-21	CERAMIC	220PF	10%	50V
C647	1-162-306-11	CERAMIC	0.01uF	20%	16V
C648	1-126-934-11	ELECT	220uF	20%	10V
C649	1-136-164-00	FILM	0.082uF	5%	50V
C650	1-130-477-00	MYLAR	0.0033uF	5%	50V
C651	1-136-164-00	FILM	0.082uF	5%	50V
C652	1-136-173-00	FILM	0.47uF	5%	50V
C653	1-126-934-11	ELECT	220uF	20%	10V
C654	1-126-960-11	ELECT	1uF	20%	50V
C655	1-126-960-11	ELECT	1uF	20%	50V
C656	1-126-964-11	ELECT	10uF	20%	50V
C657	1-162-306-11	CERAMIC	0.01uF	20%	16V
C658	1-162-286-21	CERAMIC	220PF	10%	50V
C660	1-126-933-11	ELECT	100uF	20%	16V
C661	1-162-294-31	CERAMIC	0.001uF	10%	50V
C662	1-126-933-11	ELECT	100uF	20%	16V
C663	1-162-294-31	CERAMIC	0.001uF	10%	50V
C664	1-126-964-11	ELECT	10uF	20%	50V
C665	1-126-964-11	ELECT	10uF	20%	50V
C666	1-126-964-11	ELECT	10uF	20%	50V
C667	1-126-964-11	ELECT	10uF	20%	50V
C668	1-162-286-21	CERAMIC	220PF	10%	50V
C669	1-109-889-11	ELECT	1uF	20%	50V
C678	1-162-294-31	CERAMIC	0.001uF	10%	50V

MAIN

Ref. No.	Part No.	Description			Remark
C711	1-126-916-11	ELECT	1000uF	20%	6.3V
C712	1-164-159-21	CERAMIC	0.1uF		50V
C713	1-164-057-11	CERAMIC	30PF	5%	50V
C714	1-164-056-11	CERAMIC	27PF	5%	50V
C723	1-164-159-21	CERAMIC	0.1uF		50V
C724	1-126-933-11	ELECT	100uF	20%	16V
C766	1-162-294-31	CERAMIC	0.001uF	10%	50V
C801	1-126-961-11	ELECT	2.2uF	20%	50V
C803	1-126-925-11	ELECT	470uF	20%	10V
C804	1-164-159-21	CERAMIC	0.1uF		50V
C805	1-162-282-31	CERAMIC	100PF	10%	50V
C811	1-126-961-11	ELECT	2.2uF	20%	50V
C841	1-164-159-21	CERAMIC	0.1uF		50V
C842	1-104-665-11	ELECT	100uF	20%	10V
C853	1-162-294-31	CERAMIC	0.001uF	10%	50V
C855	1-162-294-31	CERAMIC	0.001uF	10%	50V
C856	1-162-294-31	CERAMIC	0.001uF	10%	50V
C861	1-162-306-11	CERAMIC	0.01uF	20%	16V
C862	1-126-964-11	ELECT	10uF	20%	50V
C863	1-126-964-11	ELECT	10uF	20%	50V
C901	1-126-937-11	ELECT	4700uF	20%	16V
C902	1-126-943-11	ELECT	2200uF	20%	16V
C903	1-164-159-21	CERAMIC	0.1uF		50V
C904	1-164-159-21	CERAMIC	0.1uF		50V
C908	1-126-933-11	ELECT	100uF	20%	16V
C909	1-126-933-11	ELECT	100uF	20%	16V
C910	1-126-964-11	ELECT	10uF	20%	50V
C911	1-126-768-11	ELECT	2200uF	20%	16V
C913	1-126-964-11	ELECT	10uF	20%	50V
C914	1-126-767-11	ELECT	1000uF	20%	16V
C915	1-126-964-11	ELECT	10uF	20%	50V
C916	1-126-916-11	ELECT	1000uF	20%	6.3V
C917	1-126-925-11	ELECT	470uF	20%	10V
C918	1-126-933-11	ELECT	100uF	20%	16V
C919	1-126-964-11	ELECT	10uF	20%	50V
C920	1-126-933-11	ELECT	100uF	20%	16V
C943	1-162-294-31	CERAMIC	0.001uF	10%	50V
C944	1-126-947-11	ELECT	47uF	20%	35V
C951	1-126-947-11	ELECT	47uF	20%	35V
C952	1-136-165-00	FILM	0.1uF	5%	50V
C953	1-136-173-00	FILM	0.47uF	5%	50V
C961	1-162-306-11	CERAMIC	0.01uF	20%	16V
C991	1-162-306-11	CERAMIC	0.01uF	20%	16V
		< CONNECTOR >			
CN401	1-568-838-11	SOCKET, CONNECTOR 21P			
* CN402	1-568-830-11	SOCKET, CONNECTOR 11P			
* CN403	1-568-449-11	HOUSING, CONNECTOR (PC BOARD) 3P			
* CN701	1-568-836-11	SOCKET, CONNECTOR 17P			
CN801	1-568-802-11	SOCKET, CONNECTOR 19P			
* CN830	1-568-936-11	PIN, CONNECTOR 9P			
* CN851	1-568-832-11	SOCKET, CONNECTOR 13P			
CN871	1-566-999-11	PIN, CONNECTOR 13P			
* CN901	1-770-734-11	CONNECTOR, BOARD TO BOARD 20P			
* CN961	1-564-518-11	PLUG, CONNECTOR 3P			

Ref. No.	Part No.	Description	Remark
		< DIODE >	
D702	8-719-991-33	DIODE 1SS133T-77	
D772	8-719-991-33	DIODE 1SS133T-77	
D799	8-719-991-33	DIODE 1SS133T-77	
D801	8-719-991-33	DIODE 1SS133T-77	
D802	8-719-991-33	DIODE 1SS133T-77	
D901	8-719-025-03	DIODE RBA-402	
D902	8-719-200-82	DIODE 11ES2-NTA1B	
D903	8-719-200-82	DIODE 11ES2-NTA1B	
D904	8-719-991-33	DIODE 1SS133T-77	
D905	8-719-200-82	DIODE 11ES2-NTA1B	
D906	8-719-200-82	DIODE 11ES2-NTA1B	
D907	8-719-991-33	DIODE 1SS133T-77	
D908	8-719-200-82	DIODE 11ES2-NTA1B	
D941	8-719-934-25	DIODE HZS33-1L	
D942	8-719-109-89	DIODE RD5.6ESB2	
D951	8-719-991-33	DIODE 1SS133T-77	
D952	8-719-991-33	DIODE 1SS133T-77	
D953	8-719-991-33	DIODE 1SS133T-77	
D954	8-719-991-33	DIODE 1SS133T-77	
		< GROUND TERMINAL >	
* EPT901	1-537-738-21	TERMINAL, EARTH	
		< COIL >	
FB801	1-412-473-21	INDUCTOR 0uH	
		< IC >	
IC101	8-759-634-51	IC M5218AP	
IC102	8-759-208-08	IC BU4052BC	
IC103	8-759-140-53	IC MC14053BCP	
IC201	8-759-460-02	IC M62427FP-A	
IC401	8-759-363-21	IC HA12203NT	
IC402	8-759-822-09	IC LB1641	
IC601	8-759-442-96	IC LA2786	
IC602	8-759-442-97	IC LV1016	
IC603	8-759-634-51	IC M5218AP	
IC604	8-759-281-42	IC TC9210P	
IC701	8-759-531-31	IC uPD780018YGF-028-3BA	
IC841	8-749-923-04	IC TOTX178 (CD DIGITAL OUT OPTICAL)	
IC861	8-759-634-51	IC M5218AP	
IC901	8-759-288-53	IC LA5617	
IC902	8-759-231-53	IC M5F7805L	
IC903	8-759-604-86	IC M5F7807L	
IC904	8-759-604-39	IC M5F78M12L	
IC905	8-759-604-38	IC M5F78M10L	
IC951	8-759-635-63	IC M51943BSL-TP	
		< COIL >	
J101	1-774-411-11	JACK, PIN 6P (VIDEO/MD (AUDIO) IN/OUT, PHONO IN)	
		< COIL >	
L601	1-410-509-11	INDUCTOR 10uH	
L602	1-410-509-11	INDUCTOR 10uH	
L604	1-410-509-11	INDUCTOR 10uH	

Ref. No.	Part No.	Description	Remark
L769	1-410-521-11	INDUCTOR 100uH	
L770	1-410-521-11	INDUCTOR 100uH	
L772	1-410-521-11	INDUCTOR 100uH	
L841	1-410-521-11	INDUCTOR 100uH	
L861	1-410-521-11	INDUCTOR 100uH	
		< TRANSISTOR >	
Q120	8-729-029-21	TRANSISTOR DTA114ESA-TP	
Q121	8-729-141-26	TRANSISTOR 2SC3622ATP-LK	
Q122	8-729-141-26	TRANSISTOR 2SC3622ATP-LK	
Q123	8-729-029-21	TRANSISTOR DTA114ESA-TP	
Q124	8-729-029-86	TRANSISTOR DTC124ESA-TP	
Q201	8-729-620-05	TRANSISTOR 2SC2603TP-EF	
Q202	8-729-620-05	TRANSISTOR 2SC2603TP-EF	
Q206	8-729-029-86	TRANSISTOR DTC124ESA-TP	
Q251	8-729-620-05	TRANSISTOR 2SC2603TP-EF	
Q252	8-729-620-05	TRANSISTOR 2SC2603TP-EF	
Q253	8-729-141-26	TRANSISTOR 2SC3622ATP-LK	
Q254	8-729-141-26	TRANSISTOR 2SC3622ATP-LK	
Q256	8-729-029-86	TRANSISTOR DTC124ESA-TP	
Q403	8-729-801-93	TRANSISTOR 2SD1387-34-TP	
Q406	8-729-029-66	TRANSISTOR DTC114ESA-TP	
Q407	8-729-029-66	TRANSISTOR DTC114ESA-TP	
Q408	8-729-119-76	TRANSISTOR 2SA1115TP-EF	
Q409	8-729-029-66	TRANSISTOR DTC114ESA-TP	
Q601	8-729-141-26	TRANSISTOR 2SC3622ATP-LK	
Q602	8-729-141-26	TRANSISTOR 2SC3622ATP-LK	
Q901	8-729-620-05	TRANSISTOR 2SC2603TP-EF	
Q904	8-729-040-20	TRANSISTOR RT1P137L-TP	
Q905	8-729-029-86	TRANSISTOR DTC124ESA-TP	
Q906	8-729-040-20	TRANSISTOR RT1P137L-TP	
Q907	8-729-029-40	TRANSISTOR DTA124ESA-TP	
Q912	8-729-029-86	TRANSISTOR DTC124ESA-TP	
Q941	8-729-118-01	TRANSISTOR 2SB1014TP-34	
Q951	8-729-620-05	TRANSISTOR 2SC2603TP-EF	
Q961	8-729-111-29	TRANSISTOR 2SD1616-TP-LK	
Q962	8-729-119-76	TRANSISTOR 2SA1115TP-EF	
		< RESISTOR >	
R101	1-249-417-11	CARBON 1K 5% 1/4W F	
R102	1-249-417-11	CARBON 1K 5% 1/4W F	
R103	1-249-437-11	CARBON 47K 5% 1/4W	
R104	1-249-417-11	CARBON 1K 5% 1/4W F	
R105	1-247-897-11	CARBON 560K 5% 1/4W	
R106	1-249-437-11	CARBON 47K 5% 1/4W	
R107	1-249-417-11	CARBON 1K 5% 1/4W F	
R108	1-249-441-11	CARBON 100K 5% 1/4W	
R109	1-247-815-91	CARBON 220 5% 1/4W	
R121	1-249-424-11	CARBON 3.9K 5% 1/4W F	
R122	1-247-887-00	CARBON 220K 5% 1/4W	
R123	1-249-417-11	CARBON 1K 5% 1/4W F	
R124	1-249-441-11	CARBON 100K 5% 1/4W	
R125	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R126	1-249-441-11	CARBON 100K 5% 1/4W	
R127	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R128	1-249-426-11	CARBON 5.6K 5% 1/4W	
R129	1-249-429-11	CARBON 10K 5% 1/4W	

Ref. No.	Part No.	Description	Remark
R130	1-249-441-11	CARBON 100K 5% 1/4W	
R151	1-249-417-11	CARBON 1K 5% 1/4W F	
R152	1-249-417-11	CARBON 1K 5% 1/4W F	
R153	1-249-437-11	CARBON 47K 5% 1/4W	
R154	1-249-417-11	CARBON 1K 5% 1/4W F	
R155	1-247-897-11	CARBON 560K 5% 1/4W	
R156	1-249-437-11	CARBON 47K 5% 1/4W	
R157	1-249-417-11	CARBON 1K 5% 1/4W F	
R158	1-249-441-11	CARBON 100K 5% 1/4W	
R159	1-247-815-91	CARBON 220 5% 1/4W	
R171	1-249-424-11	CARBON 3.9K 5% 1/4W F	
R172	1-247-887-00	CARBON 220K 5% 1/4W	
R173	1-249-417-11	CARBON 1K 5% 1/4W F	
R174	1-249-441-11	CARBON 100K 5% 1/4W	
R178	1-249-426-11	CARBON 5.6K 5% 1/4W	
R179	1-249-429-11	CARBON 10K 5% 1/4W	
R202	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R203	1-249-437-11	CARBON 47K 5% 1/4W	
R204	1-249-437-11	CARBON 47K 5% 1/4W	
R205	1-249-441-11	CARBON 100K 5% 1/4W	
R206	1-247-896-11	CARBON 510K 5% 1/4W	
R207	1-249-437-11	CARBON 47K 5% 1/4W	
R208	1-249-429-11	CARBON 10K 5% 1/4W	
R209	1-247-826-00	CARBON 620 5% 1/4W	
R210	1-249-429-11	CARBON 10K 5% 1/4W	
R211	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R212	1-249-441-11	CARBON 100K 5% 1/4W	
R213	1-249-429-11	CARBON 10K 5% 1/4W	
R214	1-249-437-11	CARBON 47K 5% 1/4W	
R215	1-249-441-11	CARBON 100K 5% 1/4W	
R216	1-247-891-00	CARBON 330K 5% 1/4W	
R217	1-249-431-11	CARBON 15K 5% 1/4W	
R222	1-247-903-00	CARBON 1M 5% 1/4W	
R223	1-247-903-00	CARBON 1M 5% 1/4W	
R230	1-247-863-91	CARBON 22K 5% 1/4W	
R231	1-247-863-91	CARBON 22K 5% 1/4W	
R232	1-247-856-00	CARBON 11K 5% 1/4W	
R240	1-249-429-11	CARBON 10K 5% 1/4W	
R241	1-249-429-11	CARBON 10K 5% 1/4W	
R242	1-249-429-11	CARBON 10K 5% 1/4W	
R243	1-249-417-11	CARBON 1K 5% 1/4W F	
R244	1-249-417-11	CARBON 1K 5% 1/4W F	
R245	1-249-417-11	CARBON 1K 5% 1/4W F	
R252	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R253	1-249-437-11	CARBON 47K 5% 1/4W	
R254	1-249-437-11	CARBON 47K 5% 1/4W	
R255	1-249-441-11	CARBON 100K 5% 1/4W	
R256	1-247-896-11	CARBON 510K 5% 1/4W	
R257	1-249-437-11	CARBON 47K 5% 1/4W	
R258	1-249-429-11	CARBON 10K 5% 1/4W	
R259	1-247-826-00	CARBON 620 5% 1/4W	
R260	1-249-429-11	CARBON 10K 5% 1/4W	
R261	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R262	1-249-441-11	CARBON 100K 5% 1/4W	
R263	1-249-429-11	CARBON 10K 5% 1/4W	
R264	1-249-437-11	CARBON 47K 5% 1/4W	
R265	1-249-441-11	CARBON 100K 5% 1/4W	

MAIN

Ref. No.	Part No.	Description			Remark
R266	1-247-891-00	CARBON	330K	5%	1/4W
R267	1-249-431-11	CARBON	15K	5%	1/4W
R273	1-247-903-00	CARBON	1M	5%	1/4W
R301	1-249-435-11	CARBON	33K	5%	1/4W
R304	1-249-426-11	CARBON	5.6K	5%	1/4W
R305	1-249-417-11	CARBON	1K	5%	1/4W F
R306	1-247-840-00	CARBON	2.4K	5%	1/4W
R307	1-247-863-91	CARBON	22K	5%	1/4W
R308	1-249-421-11	CARBON	2.2K	5%	1/4W F
R309	1-249-428-11	CARBON	8.2K	5%	1/4W F
R351	1-247-863-91	CARBON	22K	5%	1/4W
R354	1-249-426-11	CARBON	5.6K	5%	1/4W
R355	1-249-417-11	CARBON	1K	5%	1/4W F
R356	1-247-840-00	CARBON	2.4K	5%	1/4W
R357	1-247-863-91	CARBON	22K	5%	1/4W
R358	1-249-421-11	CARBON	2.2K	5%	1/4W F
R359	1-249-428-11	CARBON	8.2K	5%	1/4W F
R401	1-249-425-11	CARBON	4.7K	5%	1/4W F
R402	1-249-425-11	CARBON	4.7K	5%	1/4W F
R403	1-249-425-11	CARBON	4.7K	5%	1/4W F
R404	1-249-417-11	CARBON	1K	5%	1/4W F
R405	1-249-437-11	CARBON	47K	5%	1/4W
R406	1-249-437-11	CARBON	47K	5%	1/4W
R407	1-249-437-11	CARBON	47K	5%	1/4W
R408	1-249-437-11	CARBON	47K	5%	1/4W
R410	1-247-852-11	CARBON	7.5K	5%	1/4W
R411	1-249-422-11	CARBON	2.7K	5%	1/4W F
R414	1-249-429-11	CARBON	10K	5%	1/4W
R415	1-249-432-11	CARBON	18K	5%	1/4W
R416	1-249-429-11	CARBON	10K	5%	1/4W
R417	1-249-441-11	CARBON	100K	5%	1/4W
R419	1-249-429-11	CARBON	10K	5%	1/4W
R454	1-249-425-11	CARBON	4.7K	5%	1/4W F
R455	1-249-425-11	CARBON	4.7K	5%	1/4W F
R456	1-249-411-11	CARBON	330	5%	1/4W
R457	1-249-427-11	CARBON	6.8K	5%	1/4W F
R458	1-249-429-11	CARBON	10K	5%	1/4W
R461	1-247-843-11	CARBON	3.3K	5%	1/4W
R601	1-247-887-00	CARBON	220K	5%	1/4W
R602	1-247-887-00	CARBON	220K	5%	1/4W
R603	1-249-417-11	CARBON	1K	5%	1/4W F
R604	1-249-432-11	CARBON	18K	5%	1/4W
R605	1-249-417-11	CARBON	1K	5%	1/4W F
R615	1-249-441-11	CARBON	100K	5%	1/4W
R621	1-249-436-11	CARBON	39K	5%	1/4W
R622	1-249-436-11	CARBON	39K	5%	1/4W
R623	1-249-417-11	CARBON	1K	5%	1/4W F
R624	1-247-903-00	CARBON	1M	5%	1/4W
R625	1-249-411-11	CARBON	330	5%	1/4W
R626	1-249-417-11	CARBON	1K	5%	1/4W F
R627	1-249-417-11	CARBON	1K	5%	1/4W F
R628	1-249-417-11	CARBON	1K	5%	1/4W F
R630	1-249-425-11	CARBON	4.7K	5%	1/4W F
R631	1-249-431-11	CARBON	15K	5%	1/4W
R632	1-249-441-11	CARBON	100K	5%	1/4W
R633	1-249-425-11	CARBON	4.7K	5%	1/4W F
R634	1-249-427-11	CARBON	6.8K	5%	1/4W F
R635	1-249-441-11	CARBON	100K	5%	1/4W
R636	1-249-437-11	CARBON	47K	5%	1/4W
R637	1-249-441-11	CARBON	100K	5%	1/4W
R638	1-249-441-11	CARBON	100K	5%	1/4W
R639	1-249-417-11	CARBON	1K	5%	1/4W F
R640	1-249-417-11	CARBON	1K	5%	1/4W F
R641	1-249-417-11	CARBON	1K	5%	1/4W F
R642	1-249-417-11	CARBON	1K	5%	1/4W F
R645	1-249-429-11	CARBON	10K	5%	1/4W
R646	1-249-429-11	CARBON	10K	5%	1/4W
R650	1-249-441-11	CARBON	100K	5%	1/4W
R651	1-249-417-11	CARBON	1K	5%	1/4W F
R700	1-249-425-11	CARBON	4.7K	5%	1/4W F
R704	1-247-807-31	CARBON	100	5%	1/4W
R705	1-247-807-31	CARBON	100	5%	1/4W
R718	1-247-807-31	CARBON	100	5%	1/4W
R720	1-249-425-11	CARBON	4.7K	5%	1/4W F
R726	1-247-807-31	CARBON	100	5%	1/4W
R727	1-247-807-31	CARBON	100	5%	1/4W
R728	1-247-807-31	CARBON	100	5%	1/4W
R730	1-249-431-11	CARBON	15K	5%	1/4W
R731	1-249-415-11	CARBON	680	5%	1/4W F
R734	1-247-807-31	CARBON	100	5%	1/4W
R736	1-247-807-31	CARBON	100	5%	1/4W
R744	1-247-807-31	CARBON	100	5%	1/4W
R745	1-247-807-31	CARBON	100	5%	1/4W
R747	1-247-807-31	CARBON	100	5%	1/4W
R748	1-247-807-31	CARBON	100	5%	1/4W
R755	1-247-807-31	CARBON	100	5%	1/4W
R756	1-247-807-31	CARBON	100	5%	1/4W
R757	1-247-807-31	CARBON	100	5%	1/4W
R758	1-247-807-31	CARBON	100	5%	1/4W
R760	1-247-807-31	CARBON	100	5%	1/4W
R761	1-247-807-31	CARBON	100	5%	1/4W
R762	1-247-807-31	CARBON	100	5%	1/4W
R765	1-247-807-31	CARBON	100	5%	1/4W
R766	1-247-807-31	CARBON	100	5%	1/4W
R767	1-247-807-31	CARBON	100	5%	1/4W
R768	1-247-807-31	CARBON	100	5%	1/4W
R773	1-247-807-31	CARBON	100	5%	1/4W
R774	1-247-807-31	CARBON	100	5%	1/4W
R776	1-247-807-31	CARBON	100	5%	1/4W
R777	1-247-807-31	CARBON	100	5%	1/4W
R794	1-247-807-31	CARBON	100	5%	1/4W
R795	1-247-807-31	CARBON	100	5%	1/4W
R796	1-247-807-31	CARBON	100	5%	1/4W
R797	1-247-807-31	CARBON	100	5%	1/4W
R798	1-249-425-11	CARBON	4.7K	5%	1/4W F
R801	1-247-807-31	CARBON	100	5%	1/4W
R802	1-249-435-11	CARBON	33K	5%	1/4W
R811	1-247-807-31	CARBON	100	5%	1/4W
R812	1-249-435-11	CARBON	33K	5%	1/4W
R815	1-247-807-31	CARBON	100	5%	1/4W
R856	1-249-417-11	CARBON	1K	5%	1/4W F
R858	1-249-417-11	CARBON	1K	5%	1/4W F
R861	1-247-886-11	CARBON	200K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R862	1-249-441-11	CARBON	100K	5%	1/4W
R869	1-249-429-11	CARBON	10K	5%	1/4W
R870	1-247-843-11	CARBON	3.3K	5%	1/4W
R877	1-249-437-11	CARBON	47K	5%	1/4W
R901	1-247-895-91	CARBON	470K	5%	1/4W
R902	1-249-417-11	CARBON	1K	5%	1/4W F
R906	1-249-417-11	CARBON	1K	5%	1/4W F
R907	1-249-429-11	CARBON	10K	5%	1/4W
⚠R908	1-215-910-00	METAL OXIDE	68	5%	3W F
⚠R909	1-215-910-00	METAL OXIDE	68	5%	3W F
⚠R910	1-215-910-00	METAL OXIDE	68	5%	3W F
⚠R911	1-215-910-00	METAL OXIDE	68	5%	3W F
R912	1-249-417-11	CARBON	1K	5%	1/4W F
⚠R941	1-217-637-00	FUSIBLE	1	5%	1/4W F
R942	1-247-863-91	CARBON	22K	5%	1/4W
R943	1-249-425-11	CARBON	4.7K	5%	1/4W F
R944	1-247-815-91	CARBON	220	5%	1/4W
R945	1-247-815-91	CARBON	220	5%	1/4W
R948	1-249-417-11	CARBON	1K	5%	1/4W F
R951	1-249-417-11	CARBON	1K	5%	1/4W F
R952	1-249-425-11	CARBON	4.7K	5%	1/4W F
R953	1-247-807-31	CARBON	100	5%	1/4W
R954	1-249-437-11	CARBON	47K	5%	1/4W
R955	1-249-437-11	CARBON	47K	5%	1/4W
R956	1-249-429-11	CARBON	10K	5%	1/4W
R961	1-249-421-11	CARBON	2.2K	5%	1/4W F
R962	1-249-432-11	CARBON	18K	5%	1/4W
R963	1-249-425-11	CARBON	4.7K	5%	1/4W F
		< VARIABLE RESISTOR >			
RV301	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV351	1-238-598-11	RES, ADJ, CARBON 2.2K			
		< VIBRATOR >			
X601	1-579-125-11	VIBRATOR, CERAMIC (8MHz)			
X701	1-579-233-11	VIBRATOR, CERAMIC (5MHz)			
X702	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			

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*	A-4407-212-A	PANEL BOARD, COMPLETE			
		**********			
*	4-949-935-81	CUSHION (FL)			
*	4-986-870-11	HOLDER, FL TUBE			
		< CAPACITOR >			
C601	1-126-967-11	ELECT	47uF	20%	50V
C602	1-162-306-11	CERAMIC	0.01uF	20%	16V
C603	1-126-963-11	ELECT	4.7uF	20%	50V
C604	1-126-960-11	ELECT	1uF	20%	50V
C606	1-126-960-11	ELECT	1uF	20%	50V
C608	1-126-382-11	ELECT	100uF	20%	6.3V
C610	1-162-306-11	CERAMIC	0.01uF	20%	16V
C611	1-162-306-11	CERAMIC	0.01uF	20%	16V
C612	1-126-967-11	ELECT	47uF	20%	50V
C613	1-164-159-21	CERAMIC	0.1uF		50V
C621	1-126-960-11	ELECT	1uF	20%	50V

Ref. No.	Part No.	Description			Remark
C622	1-136-161-00	FILM	0.047uF	5%	50V
C623	1-126-957-11	ELECT	0.22uF	20%	50V
C624	1-126-957-11	ELECT	0.22uF	20%	50V
C625	1-162-306-11	CERAMIC	0.01uF	20%	16V
C626	1-126-957-11	ELECT	0.22uF	20%	50V
C627	1-136-159-00	FILM	0.033uF	5%	50V
C628	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C629	1-126-957-11	ELECT	0.22uF	20%	50V
C630	1-162-293-31	CERAMIC	820PF	10%	50V
C631	1-126-957-11	ELECT	0.22uF	20%	50V
C632	1-126-957-11	ELECT	0.22uF	20%	50V
C641	1-162-286-21	CERAMIC	220PF	10%	50V
C642	1-162-286-21	CERAMIC	220PF	10%	50V
C643	1-162-286-21	CERAMIC	220PF	10%	50V
C644	1-162-286-21	CERAMIC	220PF	10%	50V
C645	1-162-286-21	CERAMIC	220PF	10%	50V
C646	1-162-286-21	CERAMIC	220PF	10%	50V
C647	1-162-286-21	CERAMIC	220PF	10%	50V
C648	1-162-286-21	CERAMIC	220PF	10%	50V
C649	1-162-286-21	CERAMIC	220PF	10%	50V
C650	1-162-286-21	CERAMIC	220PF	10%	50V
C651	1-162-286-21	CERAMIC	220PF	10%	50V
C652	1-162-286-21	CERAMIC	220PF	10%	50V
C653	1-162-286-21	CERAMIC	220PF	10%	50V
C654	1-162-286-21	CERAMIC	220PF	10%	50V
C655	1-162-286-21	CERAMIC	220PF	10%	50V
C656	1-162-286-21	CERAMIC	220PF	10%	50V
C695	1-164-159-21	CERAMIC	0.1uF		50V
C696	1-164-159-21	CERAMIC	0.1uF		50V
C697	1-162-294-31	CERAMIC	1000PF	10%	50V
		< CONNECTOR >			
* CN601	1-568-836-11	SOCKET, CONNECTOR 17P			
* CN602	1-568-947-11	PIN, CONNECTOR 9P			
CN603	1-506-486-11	PIN, CONNECTOR 7P			
* CN604	1-568-947-11	PIN, CONNECTOR 9P			
		< DIODE >			
D601	8-719-991-33	DIODE 1SS133T-77			
D602	8-719-991-33	DIODE 1SS133T-77			
D603	8-719-991-33	DIODE 1SS133T-77			
D604	8-719-991-33	DIODE 1SS133T-77			
D605	8-719-991-33	DIODE 1SS133T-77			
D606	8-719-991-33	DIODE 1SS133T-77			
D607	8-719-991-33	DIODE 1SS133T-77			
D611	8-719-057-29	DIODE SML78423C-TP15 (TUNER/BAND)			
D612	8-719-057-29	DIODE SML78423C-TP15 (TUNER/BAND)			
D613	8-719-058-04	DIODE SEL5223S-TP15 (ENTER/NEXT)			
D614	8-719-058-04	DIODE SEL5223S-TP15 (GROOVE)			
D615	8-719-058-04	DIODE SEL5223S-TP15 (SUPER WOOFER)			
D616	8-719-058-04	DIODE SEL5223S-TP15 (EFFECT)			
D617	8-719-058-04	DIODE SEL5223S-TP15 (ENTER)			
D618	8-719-058-04	DIODE SEL5223S-TP15 (FILE 1)			
D619	8-719-058-04	DIODE SEL5223S-TP15 (FILE 2)			
D620	8-719-058-04	DIODE SEL5223S-TP15 (FILE 3)			
D621	8-719-058-04	DIODE SEL5223S-TP15 (FILE 4)			
D622	8-719-058-04	DIODE SEL5223S-TP15 (FILE 5)			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

PANEL

Ref. No.	Part No.	Description	Remark
D623	8-719-058-04	DIODE SEL5223S-TP15 (P.FILE)	
D624	8-719-058-04	DIODE SEL5223S-TP15 (MENU 2)	
D625	8-719-058-04	DIODE SEL5223S-TP15 (MENU 1)	
D626	8-719-058-04	DIODE SEL5223S-TP15 (DSP)	
D627	8-719-058-04	DIODE SEL5223S-TP15 (PROLOGIC)	
D628	8-719-058-04	DIODE SEL5223S-TP15 (KEY CONTROL)	
D629	8-719-058-04	DIODE SEL5223S-TP15 (PROLOGIC)	
		< FERRITE BEAD >	
FB601	1-412-473-21	INDUCTOR 0UH	
		< FLUORESCENT INDICATOR >	
FL601	1-517-617-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC601	8-759-526-36	IC TMP87CH75F-6659	
IC602	8-759-459-84	IC NJL56H400	
		< COIL >	
L601	1-410-509-11	INDUCTOR 10uH	
		< TRANSISTOR >	
Q601	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q602	8-729-118-00	TRANSISTOR 2SB1116-L	
Q603	8-729-118-00	TRANSISTOR 2SB1116-L	
Q604	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q605	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q606	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q607	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q608	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q609	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q610	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q611	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q612	8-729-119-76	TRANSISTOR 2SA1175-HFE (XB88AVK)	
Q612	8-729-119-77	TRANSISTOR 2SA1175-FEK (XB88K)	
Q613	8-729-119-76	TRANSISTOR 2SA1175-HFE (XB88AVK)	
Q613	8-729-119-77	TRANSISTOR 2SA1175-FEK (XB88K)	
Q614	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q615	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q616	8-729-119-76	TRANSISTOR 2SA1175-HFE (XB88AVK)	
Q616	8-729-119-77	TRANSISTOR 2SA1175-FEK (XB88K)	
Q617	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q618	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q619	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q621	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q622	8-729-119-77	TRANSISTOR 2SA1175-FEK	
		< RESISTOR >	
R601	1-247-843-11	CARBON 3.3K 5% 1/4W	
R602	1-249-429-11	CARBON 10K 5% 1/4W	
R603	1-247-903-00	CARBON 1M 5% 1/4W	
R606	1-249-429-11	CARBON 10K 5% 1/4W	
R607	1-249-429-11	CARBON 10K 5% 1/4W	
R608	1-249-429-11	CARBON 10K 5% 1/4W	
R609	1-249-429-11	CARBON 10K 5% 1/4W	
R610	1-249-429-11	CARBON 10K 5% 1/4W	
R611	1-247-843-11	CARBON 3.3K 5% 1/4W	
R612	1-247-843-11	CARBON 3.3K 5% 1/4W	
R613	1-249-401-11	CARBON 47 5% 1/4W	F
R614	1-249-429-11	CARBON 10K 5% 1/4W	
R615	1-249-429-11	CARBON 10K 5% 1/4W	
R617	1-249-429-11	CARBON 10K 5% 1/4W	
R621	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R622	1-249-437-11	CARBON 47K 5% 1/4W	
R623	1-247-895-91	CARBON 470K 5% 1/4W	
R624	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R625	1-249-437-11	CARBON 47K 5% 1/4W	
R626	1-247-895-91	CARBON 470K 5% 1/4W	
R627	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R628	1-249-437-11	CARBON 47K 5% 1/4W	
R629	1-247-895-91	CARBON 470K 5% 1/4W	
R631	1-249-437-11	CARBON 47K 5% 1/4W	
R632	1-247-895-91	CARBON 470K 5% 1/4W	
R633	1-247-897-11	CARBON 560K 5% 1/4W	
R634	1-247-897-11	CARBON 560K 5% 1/4W	
R635	1-247-897-11	CARBON 560K 5% 1/4W	
R636	1-247-897-11	CARBON 560K 5% 1/4W	
R637	1-247-895-91	CARBON 470K 5% 1/4W	
R638	1-249-435-11	CARBON 33K 5% 1/4W	
R641	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R642	1-249-401-11	CARBON 47 5% 1/4W	F
R643	1-249-403-11	CARBON 68 5% 1/4W	F
R644	1-247-807-31	CARBON 100 5% 1/4W	
R645	1-249-407-11	CARBON 150 5% 1/4W	F
R646	1-249-407-11	CARBON 150 5% 1/4W	F
R647	1-247-815-91	CARBON 220 5% 1/4W	
R648	1-249-411-11	CARBON 330 5% 1/4W	
R649	1-249-413-11	CARBON 470 5% 1/4W	F
R650	1-249-415-11	CARBON 680 5% 1/4W	F
R651	1-249-417-11	CARBON 1K 5% 1/4W	F
R652	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R653	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R654	1-247-843-11	CARBON 3.3K 5% 1/4W	
R655	1-249-427-11	CARBON 6.8K 5% 1/4W	F
R656	1-249-431-11	CARBON 15K 5% 1/4W	
R657	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R658	1-249-401-11	CARBON 47 5% 1/4W	F
R659	1-249-403-11	CARBON 68 5% 1/4W	F
R660	1-247-807-31	CARBON 100 5% 1/4W	
R661	1-249-407-11	CARBON 150 5% 1/4W	F
R662	1-249-407-11	CARBON 150 5% 1/4W	F
R663	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R664	1-249-401-11	CARBON 47 5% 1/4W	F
R665	1-249-403-11	CARBON 68 5% 1/4W	F
R666	1-247-807-31	CARBON 100 5% 1/4W	
R667	1-249-407-11	CARBON 150 5% 1/4W	F
R668	1-249-407-11	CARBON 150 5% 1/4W	F
R669	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R670	1-249-401-11	CARBON 47 5% 1/4W	F
R671	1-249-403-11	CARBON 68 5% 1/4W	F
R672	1-247-807-31	CARBON 100 5% 1/4W	
R673	1-249-407-11	CARBON 150 5% 1/4W	F

Ref. No.	Part No.	Description			Remark
R674	1-249-407-11	CARBON	150	5%	1/4W F
R675	1-247-815-91	CARBON	220	5%	1/4W
R676	1-249-411-11	CARBON	330	5%	1/4W
R677	1-249-413-11	CARBON	470	5%	1/4W F
R678	1-249-415-11	CARBON	680	5%	1/4W F
R679	1-249-419-11	CARBON	1.5K	5%	1/4W F
R681	1-249-429-11	CARBON	10K	5%	1/4W
R682	1-249-421-11	CARBON	2.2K	5%	1/4W F
R683	1-247-887-00	CARBON	220K	5%	1/4W
R684	1-249-421-11	CARBON	2.2K	5%	1/4W
R685	1-247-815-91	CARBON	220	5%	1/4W F
R686	1-247-807-31	CARBON	100	5%	1/4W
R687	1-247-807-31	CARBON	100	5%	1/4W
R688	1-247-807-31	CARBON	100	5%	1/4W
R689	1-247-807-31	CARBON	100	5%	1/4W
R690	1-247-807-31	CARBON	100	5%	1/4W
R691	1-247-807-31	CARBON	100	5%	1/4W
R692	1-247-807-31	CARBON	100	5%	1/4W
R693	1-247-807-31	CARBON	100	5%	1/4W
R694	1-247-807-31	CARBON	100	5%	1/4W
R695	1-247-807-31	CARBON	100	5%	1/4W
R696	1-247-807-31	CARBON	100	5%	1/4W
R697	1-247-807-31	CARBON	100	5%	1/4W
R698	1-247-807-31	CARBON	100	5%	1/4W
R699	1-247-807-31	CARBON	100	5%	1/4W
R700	1-247-807-31	CARBON	100	5%	1/4W
R701	1-247-807-31	CARBON	100	5%	1/4W
R702	1-247-807-31	CARBON	100	5%	1/4W
R703	1-247-807-31	CARBON	100	5%	1/4W
R704	1-247-807-31	CARBON	100	5%	1/4W

< SWITCH >

S601	1-554-303-21	SWITCH, TACTILE (ENTER/NEXT)
S602	1-554-303-21	SWITCH, TACTILE (TUNER MEMORY)
S603	1-554-303-21	SWITCH, TACTILE (TUNING MODE)
S604	1-554-303-21	SWITCH, TACTILE (TUNER/BAND)
S605	1-554-303-21	SWITCH, TACTILE (TUNING +)
S606	1-554-303-21	SWITCH, TACTILE (TUNING –)
S607	1-554-303-21	SWITCH, TACTILE (STEREO/MONO)
S609	1-554-303-21	SWITCH, TACTILE (FUNCTION)
S610	1-554-303-21	SWITCH, TACTILE (GROOVE)
S611	1-554-303-21	SWITCH, TACTILE (GEQ ▲)
S612	1-554-303-21	SWITCH, TACTILE (GEQ ◀)
S613	1-554-303-21	SWITCH, TACTILE (GEQ ▶)
S614	1-554-303-21	SWITCH, TACTILE (GEQ ▼)
S615	1-554-303-21	SWITCH, TACTILE (SUPER WOOFER)
S616	1-554-303-21	SWITCH, TACTILE (SUPER W MODE)
S617	1-554-303-21	SWITCH, TACTILE (KEY CONTROL ♯)
S618	1-554-303-21	SWITCH, TACTILE (KEY CONTROL ♭)
S619	1-554-303-21	SWITCH, TACTILE (GEQ CONTROL)
S620	1-554-303-21	SWITCH, TACTILE (ENTER)
S621	1-554-303-21	SWITCH, TACTILE (EFFECT)
S622	1-554-303-21	SWITCH, TACTILE (WAVE)
S623	1-554-303-21	SWITCH, TACTILE (KARAOKE PON/MPX)
S624	1-554-303-21	SWITCH, TACTILE (DSP)
S625	1-554-303-21	SWITCH, TACTILE (PROLOGIC)
S626	1-554-303-21	SWITCH, TACTILE (P FILE MEMORY)
S627	1-554-303-21	SWITCH, TACTILE (SPECTRUM ANALYZER)
S628	1-554-303-21	SWITCH, TACTILE (DISPLAY/DEMO)
S629	1-554-303-21	SWITCH, TACTILE (POWER)
S630	1-554-303-21	SWITCH, TACTILE (◴/TIMER SET)
S631	1-554-303-21	SWITCH, TACTILE (REC)
S632	1-554-303-21	SWITCH, TACTILE (DAILY 1)
S633	1-554-303-21	SWITCH, TACTILE (DAILY 2)
S634	1-554-303-21	SWITCH, TACTILE (SLEEP)
S701	1-473-392-11	ENCODER, ROTARY (VOLUME)

< VIBRATOR >

X601	1-579-125-11	VIBRATOR, CERAMIC (8MHz)

****

*	A-4407-990-A	POWER BOARD, COMPLETE

****

< CAPACITOR >

C101	1-130-781-00	FILM	0.22uF	10%	100V
C102	1-130-781-00	FILM	0.22uF	10%	100V
C103	1-136-169-00	FILM	0.22uF	5%	50V
C104	1-136-169-00	FILM	0.22uF	5%	50V
C105	1-162-294-31	CERAMIC	0.001uF	10%	50V
C106	1-162-294-31	CERAMIC	0.001uF	10%	50V
C107	1-128-576-11	ELECT	100uF	20%	63V
C108	1-128-563-11	ELECT	100uF	20%	100V
C110	1-104-665-11	ELECT	100uF	20%	50V
C151	1-128-493-11	ELECT	4700uF	20%	71V
C152	1-128-493-11	ELECT	4700uF	20%	71V
C153	1-128-550-11	ELECT	2200uF	20%	50V
C154	1-128-550-11	ELECT	2200uF	20%	50V
C201	1-128-582-11	ELECT	10uF	20%	100V
C202	1-162-292-31	CERAMIC	680PF	10%	50V
C203	1-162-286-21	CERAMIC	220PF	10%	50V
C204	1-126-967-11	ELECT	47uF	20%	50V
C205	1-126-967-11	ELECT	47uF	20%	50V
C206	1-128-560-11	ELECT	22uF	20%	100V
C208	1-126-965-11	ELECT	22uF	20%	50V
C210	1-130-493-00	MYLAR	0.068uF	5%	50V
C211	1-130-493-00	MYLAR	0.068uF	5%	50V
C225	1-162-284-31	CERAMIC	150PF	10%	50V
C226	1-162-284-31	CERAMIC	150PF	10%	50V
C228	1-164-159-21	CERAMIC	0.1uF		50V
C232	1-162-284-31	CERAMIC	150PF	10%	50V
C251	1-128-582-11	ELECT	10uF	20%	100V
C252	1-162-292-31	CERAMIC	680PF	10%	50V
C253	1-162-286-21	CERAMIC	220PF	10%	50V
C254	1-126-967-11	ELECT	47uF	20%	50V
C255	1-126-967-11	ELECT	47uF	20%	50V
C256	1-128-560-11	ELECT	22uF	20%	100V
C260	1-130-493-00	MYLAR	0.068uF	5%	50V
C261	1-130-493-00	MYLAR	0.068uF	5%	50V
C301	1-126-959-11	ELECT	0.47uF	20%	50V
C302	1-126-934-11	ELECT	220uF	20%	10V
C303	1-104-665-11	ELECT	100uF	20%	10V
C304	1-126-961-11	ELECT	2.2uF	20%	50V
C305	1-104-665-11	ELECT	100uF	20%	10V

POWER

Ref. No.	Part No.	Description			Remark
C331	1-126-924-11	ELECT	330uF	20%	10V
C401	1-126-963-11	ELECT	4.7uF	20%	50V
C410	1-161-494-00	CERAMIC	0.022uF		25V
C411	1-161-494-00	CERAMIC	0.022uF		25V
C412	1-161-494-00	CERAMIC	0.022uF		25V
C413	1-161-494-00	CERAMIC	0.022uF		25V
		< CONNECTOR >			
* CN201	1-766-957-11	CONNECTOR, BOARD TO BOARD 20P			
		< DIODE >			
D101	8-719-510-68	DIODE D5SBA20F01			
D102	8-719-025-03	DIODE RBA-402-SL			
D104	8-719-200-82	DIODE 11ES2			
D105	8-719-200-82	DIODE 11ES2			
D110	8-719-200-82	DIODE 11ES2			
D111	8-719-200-82	DIODE 11ES2			
D201	8-719-991-33	DIODE 1SS133T-77			
D251	8-719-991-33	DIODE 1SS133T-77			
D301	8-719-991-33	DIODE 1SS133T-77			
D302	8-719-991-33	DIODE 1SS133T-77			
D303	8-719-991-33	DIODE 1SS133T-77			
D321	8-719-991-33	DIODE 1SS133T-77			
D331	8-719-991-33	DIODE 1SS133T-77			
D332	8-719-991-33	DIODE 1SS133T-77			
D401	8-719-991-33	DIODE 1SS133T-77			
D402	8-719-991-33	DIODE 1SS133T-77			
D403	8-719-991-33	DIODE 1SS133T-77			
D404	8-719-991-33	DIODE 1SS133T-77			
D405	8-719-991-33	DIODE 1SS133T-77			
D406	8-719-991-33	DIODE 1SS133T-77			
		< EARTH TERMINAL >			
* EP101	1-537-738-21	TERMINAL, EARTH			
* EP201	1-537-738-21	TERMINAL, EARTH			
		< FUSE >			
⚠F101	1-532-504-31	FUSE, TIME-LAG (4A/250V)			
⚠F102	1-532-504-31	FUSE, TIME-LAG (4A/250V)			
⚠F103	1-532-506-31	FUSE, TIME-LAG (6.3A/250V)			
⚠F104	1-532-506-31	FUSE, TIME-LAG (6.3A/250V)			
		< FUSE HOLDER >			
FH101	1-533-233-21	HOLDER, FUSE			
FH102	1-533-233-21	HOLDER, FUSE			
FH103	1-533-233-21	HOLDER, FUSE			
FH104	1-533-233-21	HOLDER, FUSE			
FH105	1-533-233-21	HOLDER, FUSE			
FH106	1-533-233-21	HOLDER, FUSE			
FH107	1-533-233-21	HOLDER, FUSE			
FH108	1-533-233-21	HOLDER, FUSE			
		< IC >			
IC201	8-749-921-68	IC STK-4231MK2			
IC301	8-759-111-68	IC uPC1237HA			

Ref. No.	Part No.	Description			Remark
		< TRANSISTOR >			
Q201	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA			
Q251	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA			
Q301	8-729-030-02	TRANSISTOR DTC144ESA-TP			
Q323	8-729-029-40	TRANSISTOR DTA124ESA-TP			
Q331	8-729-030-02	TRANSISTOR DTC144ESA-TP			
Q401	8-729-029-66	TRANSISTOR DTC114ESA-TP			
Q402	8-729-029-68	TRANSISTOR DTC114TSA-TP			
Q403	8-729-040-20	TRANSISTOR RT1P137L-TP			
Q404	8-729-040-20	TRANSISTOR RT1P137L-TP			
Q405	8-729-029-66	TRANSISTOR DTC114ESA-TP			
		< RESISTOR >			
⚠R101	1-219-122-91	FUSIBLE	0.33	5%	1/4W F
R201	1-249-417-11	CARBON	1K	5%	1/4W F
R202	1-249-437-11	CARBON	47K	5%	1/4W
R203	1-249-413-11	CARBON	470	5%	1/4W F
R204	1-249-437-11	CARBON	47K	5%	1/4W
R206	1-260-107-11	CARBON	4.7K	5%	1/2W
R208	1-260-107-11	CARBON	4.7K	5%	1/2W
⚠R209	1-212-881-11	FUSIBLE	100	5%	1/4W F
⚠R210	1-217-156-00	METAL PLATE	0.22	10%	5W
R211	1-249-417-11	CARBON	1K	5%	1/4W F
R212	1-249-431-11	CARBON	15K	5%	1/4W F
R213	1-249-441-11	CARBON	100K	5%	1/4W
R215	1-260-103-11	CARBON	2.2K	5%	1/2W
R216	1-260-103-11	CARBON	2.2K	5%	1/2W
R218	1-260-076-11	CARBON	10	5%	1/2W
R227	1-249-425-11	CARBON	4.7K	5%	1/4W F
⚠R250	1-217-637-00	FUSIBLE	1	5%	1/4W F
R251	1-249-417-11	CARBON	1K	5%	1/4W F
R252	1-249-437-11	CARBON	47K	5%	1/4W
R253	1-249-413-11	CARBON	470	5%	1/4W F
R254	1-249-437-11	CARBON	47K	5%	1/4W
R256	1-260-107-11	CARBON	4.7K	5%	1/2W
R258	1-260-107-11	CARBON	4.7K	5%	1/2W
⚠R259	1-212-881-11	FUSIBLE	100	5%	1/4W F
⚠R260	1-217-156-00	METAL PLATE	0.22	10%	5W
R261	1-249-417-11	CARBON	1K	5%	1/4W F
R262	1-249-431-11	CARBON	15K	5%	1/4W F
R263	1-249-441-11	CARBON	100K	5%	1/4W
R268	1-260-076-11	CARBON	10	5%	1/2W
R272	1-260-093-11	CARBON	330	5%	1/2W
R273	1-260-093-11	CARBON	330	5%	1/2W
R274	1-260-093-11	CARBON	330	5%	1/2W
R275	1-260-093-11	CARBON	330	5%	1/2W
R301	1-249-441-11	CARBON	100K	5%	1/4W
R302	1-247-854-11	CARBON	9.1K	5%	1/4W
R303	1-247-854-11	CARBON	9.1K	5%	1/4W
R304	1-249-429-11	CARBON	10K	5%	1/4W
R305	1-249-419-11	CARBON	1.5K	5%	1/4W F
R306	1-249-441-11	CARBON	100K	5%	1/4W
R307	1-247-863-91	CARBON	22K	5%	1/4W
R308	1-247-863-91	CARBON	22K	5%	1/4W
R309	1-247-791-91	CARBON	22	5%	1/4W
R310	1-249-437-11	CARBON	47K	5%	1/4W
R311	1-249-429-11	CARBON	10K	5%	1/4W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remark
R312	1-249-429-11	CARBON	10K	5%	1/4W
R314	1-249-439-11	CARBON	68K	5%	1/4W
R315	1-249-439-11	CARBON	68K	5%	1/4W
R316	1-249-437-11	CARBON	47K	5%	1/4W
R317	1-249-437-11	CARBON	47K	5%	1/4W
R331	1-247-890-11	CARBON	300K	5%	1/4W
R332	1-249-429-11	CARBON	10K	5%	1/4W
R333	1-249-431-11	CARBON	15K	5%	1/4W
R334	1-249-417-11	CARBON	1K	5%	1/4W F
R401	1-249-429-11	CARBON	10K	5%	1/4W
⚠R405	1-215-884-11	METAL OXIDE	47	5%	2W F
⚠R407	1-215-884-11	METAL OXIDE	47	5%	2W F
R408	1-249-437-11	CARBON	47K	5%	1/4W
R409	1-249-440-11	CARBON	82K	5%	1/4W
R410	1-249-437-11	CARBON	47K	5%	1/4W
R411	1-249-437-11	CARBON	47K	5%	1/4W
		< RELAY >			
RY401	1-755-142-11	RELAY			
RY402	1-755-141-11	RELAY			
		< TERMINAL >			
TM401	1-537-842-11	TERMINAL BOARD (FRONT SPEAKER)			
TM402	1-537-510-11	TERMINAL BOARD (SPEAKER)(6P) (SURROUND SPEAKER)			
**********					
*	A-4407-216-A	SURROUND BOARD, COMPLETE **********			
		< CAPACITOR >			
C601	1-126-963-11	ELECT	4.7uF	20%	50V
C602	1-162-292-31	CERAMIC	680PF	10%	50V
C603	1-162-286-21	CERAMIC	220PF	10%	50V
C604	1-126-967-11	ELECT	47uF	20%	50V
C605	1-126-967-11	ELECT	47uF	20%	50V
C606	1-126-968-11	ELECT	100uF	20%	50V
C608	1-126-965-11	ELECT	22uF	20%	50V
C610	1-130-493-00	MYLAR	0.068uF	5%	50V
C611	1-130-493-00	MYLAR	0.068uF	5%	50V
C620	1-126-934-11	ELECT	220uF	20%	10V
C625	1-162-284-31	CERAMIC	150PF	10%	50V
C628	1-164-159-21	CERAMIC	0.1uF		50V
C651	1-126-963-11	ELECT	4.7uF	20%	50V
C652	1-162-292-31	CERAMIC	680PF	10%	50V
C653	1-162-286-21	CERAMIC	220PF	10%	50V
C654	1-126-967-11	ELECT	47uF	20%	50V
C655	1-126-967-11	ELECT	47uF	20%	50V
C656	1-126-968-11	ELECT	100uF	20%	50V
C660	1-130-493-00	MYLAR	0.068uF	5%	50V
C661	1-130-493-00	MYLAR	0.068uF	5%	50V
		< CONNECTOR >			
CN601	1-691-765-11	PLUG (MICRO CONNECTOR) 3P			
CN602	1-691-770-11	PLUG (MICRO CONNECTOR) 8P			
CN603	1-691-766-11	PLUG (MICRO CONNECTOR) 4P			

Ref. No.	Part No.	Description			Remark
		< DIODE >			
D601	8-719-991-33	DIODE 1SS133T-77			
D602	8-719-991-33	DIODE 1SS133T-77			
D603	8-719-991-33	DIODE 1SS133T-77			
D604	8-719-991-33	DIODE 1SS133T-77			
D651	8-719-991-33	DIODE 1SS133T-77			
		< EARTH TERMINAL >			
* EP602	1-537-738-21	TERMINAL, EARTH			
		< IC >			
IC601	8-749-900-96	IC STK-4142MK2			
		< TRANSISTOR >			
Q601	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA			
Q651	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA			
Q670	8-729-620-05	TRANSISTOR 2SC2603TP-EF			
Q671	8-729-029-86	TRANSISTOR DTC124ESA-TP			
		< RESISTOR >			
R601	1-249-417-11	CARBON	1K	5%	1/4W F
R602	1-249-437-11	CARBON	47K	5%	1/4W
R603	1-249-415-11	CARBON	680	5%	1/4W F
R604	1-249-437-11	CARBON	47K	5%	1/4W
R605	1-260-103-11	CARBON	2.2K	5%	1/2W
R606	1-260-103-11	CARBON	2.2K	5%	1/2W
⚠R609	1-212-881-11	FUSIBLE	100	5%	1/4W F
⚠R610	1-217-151-00	METAL PLATE	0.22	10%	2W
R611	1-249-417-11	CARBON	1K	5%	1/4W F
R612	1-249-431-11	CARBON	15K	5%	1/4W
R613	1-249-441-11	CARBON	100K	5%	1/4W
R614	1-260-099-11	CARBON	1K	5%	1/2W
R616	1-260-099-11	CARBON	1K	5%	1/2W
R618	1-260-076-11	CARBON	10	5%	1/2W
R627	1-249-429-11	CARBON	10K	5%	1/4W
R628	1-247-881-00	CARBON	120K	5%	1/4W
R630	1-249-429-11	CARBON	10K	5%	1/4W
R642	1-249-429-11	CARBON	10K	5%	1/4W
⚠R644	1-217-637-00	FUSIBLE	1	5%	1/4W F
R651	1-249-417-11	CARBON	1K	5%	1/4W F
R652	1-249-437-11	CARBON	47K	5%	1/4W
R653	1-249-415-11	CARBON	680	5%	1/4W F
R654	1-249-437-11	CARBON	47K	5%	1/4W
R655	1-260-103-11	CARBON	2.2K	5%	1/2W
R656	1-260-103-11	CARBON	2.2K	5%	1/2W
⚠R659	1-212-881-11	FUSIBLE	100	5%	1/4W F
⚠R660	1-217-151-00	METAL PLATE	0.22	10%	2W
R661	1-249-417-11	CARBON	1K	5%	1/4W F
R662	1-249-431-11	CARBON	15K	5%	1/4W
R663	1-249-441-11	CARBON	100K	5%	1/4W
R668	1-260-076-11	CARBON	10	5%	1/2W
R670	1-249-441-11	CARBON	100K	5%	1/4W
R671	1-249-441-11	CARBON	100K	5%	1/4W
R672	1-249-437-11	CARBON	47K	5%	1/4W

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Replace only with part number specified.

SURROUND **TABLE SENSOR** **TC-A SW** **TC-B SW** **TRANS**

Ref. No.	Part No.	Description				Remark
		< THERMISTOR >				
THP670	1-807-796-11	THERMISTOR				
**********						
*	1-659-058-13	TABLE SENSOR BOARD				
		**********				
		< IC >				
IC202	8-749-924-18	IC PHOTO INTERRUPTER RPI-1391				
		< RESISTOR >				
R207	1-249-416-11	CARBON	820	5%	1/4W	F
**********						
*	1-664-012-11	TC-A SW BOARD				
		**********				
		< CONNECTOR >				
CN612	1-506-486-11	PIN, CONNECTOR 7P				
		< DIODE >				
D631	8-719-057-29	DIODE SML78423C-TP15 (▷)(DECK A)				
D632	8-719-057-29	DIODE SML78423C-TP15 (◁)(DECK A)				
		< RESISTOR >				
R705	1-249-401-11	CARBON	47	5%	1/4W	F
R706	1-249-403-11	CARBON	68	5%	1/4W	F
R707	1-247-807-31	CARBON	100	5%	1/4W	
R708	1-249-407-11	CARBON	150	5%	1/4W	F
R709	1-249-407-11	CARBON	150	5%	1/4W	F
R710	1-247-815-91	CARBON	220	5%	1/4W	
R711	1-247-807-31	CARBON	100	5%	1/4W	
R712	1-247-807-31	CARBON	100	5%	1/4W	
R713	1-247-807-31	CARBON	100	5%	1/4W	
R714	1-247-807-31	CARBON	100	5%	1/4W	
		< SWITCH >				
S641	1-554-303-21	SWITCH, TACTILE (▷)(DECK A)				
S642	1-554-303-21	SWITCH, TACTILE (◁)(DECK A)				
S643	1-554-303-21	SWITCH, TACTILE (■)(DECK A)				
S644	1-554-303-21	SWITCH, TACTILE (◀◀)(DECK A)				
S645	1-554-303-21	SWITCH, TACTILE (▶▶)(DECK A)				
S646	1-554-303-21	SWITCH, TACTILE (DOLBY NR)				
S647	1-554-303-21	SWITCH, TACTILE (DIRECTION)				
**********						
*	1-664-013-11	TC-B SW BOARD				
		**********				
		< DIODE >				
D635	8-719-057-29	DIODE SML78423C-TP15 (◁)(DECK B)				
D636	8-719-057-29	DIODE SML78423C-TP15 (▷)(DECK B)				
D637	8-719-058-17	DIODE LNJ401NPYJA (❚❚)(DECK B)				
D638	8-719-057-09	DIODE LNJ801LPDJA (● REC)(DECK B)				

Ref. No.	Part No.	Description				Remark
		< RESISTOR >				
R715	1-247-815-91	CARBON	220	5%	1/4W	
R716	1-249-411-11	CARBON	330	5%	1/4W	
R717	1-249-413-11	CARBON	470	5%	1/4W	F
R718	1-249-415-11	CARBON	680	5%	1/4W	F
R719	1-249-417-11	CARBON	1K	5%	1/4W	F
R720	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R721	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R722	1-247-843-11	CARBON	3.3K	5%	1/4W	
R723	1-247-807-31	CARBON	100	5%	1/4W	
R724	1-247-807-31	CARBON	100	5%	1/4W	
R725	1-247-807-31	CARBON	100	5%	1/4W	
R726	1-247-807-31	CARBON	100	5%	1/4W	
R727	1-247-807-31	CARBON	100	5%	1/4W	
R728	1-247-807-31	CARBON	100	5%	1/4W	
		< SWITCH >				
S651	1-554-303-21	SWITCH, TACTILE (▷)(DECK B)				
S652	1-554-303-21	SWITCH, TACTILE (◁)(DECK B)				
S653	1-554-303-21	SWITCH, TACTILE (▶▶)(DECK B)				
S654	1-554-303-21	SWITCH, TACTILE (◀◀)(DECK B)				
S655	1-554-303-21	SWITCH, TACTILE (■)(DECK B)				
S656	1-554-303-21	SWITCH, TACTILE (❚❚)(DECK B)				
S657	1-554-303-21	SWITCH, TACTILE (● REC)(DECK B)				
S658	1-554-303-21	SWITCH, TACTILE (H. SPEED DUBB)				
S659	1-554-303-21	SWITCH, TACTILE (CD SYNC)				
**********						
*	1-663-994-11	TRANS BOARD (XB88K)				
		**********				
		< CONNECTOR >				
* CN501	1-564-527-11	PLUG, CONNECTOR 12P				
CN502	1-774-108-11	PIN, CONNECTOR (PC BOARD) 2P				
		< FUSE >				
⚠F502	1-532-505-31	FUSE, TIME-LAG (T5AL/250V)				
		< RESISTOR >				
⚠R501	1-219-120-11	FUSIBLE	0.15	5%	1/4W	F
⚠R502	1-219-120-11	FUSIBLE	0.15	5%	1/4W	F
		< TRANSFORMER >				
⚠T501	1-431-639-11	TRANSFORMER, POWER				
**********						
*	1-668-169-11	TRANS BOARD (XB88AVK)				
		**********				
		< CONNECTOR >				
* CN901	1-564-526-11	PLUG, CONNECTOR 11P				
CN903	1-774-108-11	PIN, CONNECTOR (PC BOARD)				
		< FUSE >				
⚠F902	1-532-505-31	FUSE, TIME-LAG (T5AL/250V)				

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Replace only with part number specified.

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
⚠ R901	1-219-120-11	FUSIBLE	0.15	5% 1/4W F	
⚠ R903	1-219-120-11	FUSIBLE	0.15	5% 1/4W F	
		< SWITCH >			
⚠ S901	1-762-753-11	SWITCH, VOLTAGE SELECTION			
		< TRANSFORMER >			
⚠ T901	1-431-639-11	TRANSFORMER, POWER			
**********					
		MISCELLANEOUS			
		**********			
1	1-769-974-11	WIRE (FLAT TYPE) (13 CORE)			
5	1-233-545-11	ENCAPSULATED COMPONENT			
58	1-773-163-11	WIRE (FLAT TYPE) (21 CORE)			
59	1-769-949-11	WIRE (FLAT TYPE) (11 CORE)			
120	1-773-051-11	WIRE (FLAT TYPE) (17 CORE)			
⚠ 152	1-569-008-11	ADAPTOR, CONVERSION 2P (SP,MY,EA)			
⚠ 152	1-770-019-11	ADAPTOR, CONVERSION 2P (E,IA)			
156	1-782-715-11	WIRE (FLAT TYPE) (19 CORE)			
* 357	1-452-879-11	MAGNET (CDM37L-5BD29AL)			
* 357	1-452-925-11	MAGNET ASSY (CDM37LH-5BD29AL)			
⚠ 401	8-820-020-02	OPTICAL PICK-UP KSS-213D/Q-NP			
402	1-769-069-11	WIRE (FLAT TYPE)(16 CORE)			
⚠ CNP901	1-558-943-41	CORD, POWER (E,IA)			
⚠ CNP901	1-575-651-21	CORD, POWER (SP,MY,EA)			
⚠ CNP901	1-751-326-21	CORD, POWER (TH)			
FL601	1-517-617-11	INDICATOR TUBE, FLUORESCENT			
HP101	1-500-093-11	HEAD, MAGNETIC (PLAYBACK)			
HRPE101	1-500-094-11	HEAD, MAGNETIC (REC/PB/ERASE)			
M1	X-3371-223-1	MOTOR ASSY (CAPSTAN)			
M2	A-2004-410-A	MOTOR ASSY (TRIGGER)			
M201	A-4660-977-A	MOTOR ASSY (TABLE)			
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)			
M102	X-4917-504-1	MOTOR ASSY (SLED)			
M901	1-698-792-11	FAN, DC			
⚠ T501	1-431-639-11	TRANSFORMER, POWER (XB88K)			
⚠ T901	1-431-639-11	TRANSFORMER, POWER (XB88AVK)			
**********					
		**********			
		HARDWARE LIST			
		**********			
#1	7-621-255-15	SCREW +P 2X3			
#2	7-621-775-00	SCREW +B 2.6X3			
#3	7-621-775-10	SCREW +B 2.6X4			
#4	7-623-921-01	RING, RETAINING, CAPSTAN			
#5	7-685-131-19	SCREW +BTP 2.6X4 TYPE2 N-S			
#6	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S			
#7	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S			
#8	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
#9	7-685-862-09	SCREW +BVTT 2.6X8 (S)			
#10	7-685-871-01	SCREW +BVTT 3X6 (S)			
#11	7-685-872-09	SCREW +BVTT 3X8 (S)			
#12	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3			
#13	7-685-881-09	SCREW +BVTT 4X8 (S)			
#14	7-626-301-31	SPRING PIN 2X10			

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Sony Corporation
Home A&V Products Company

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